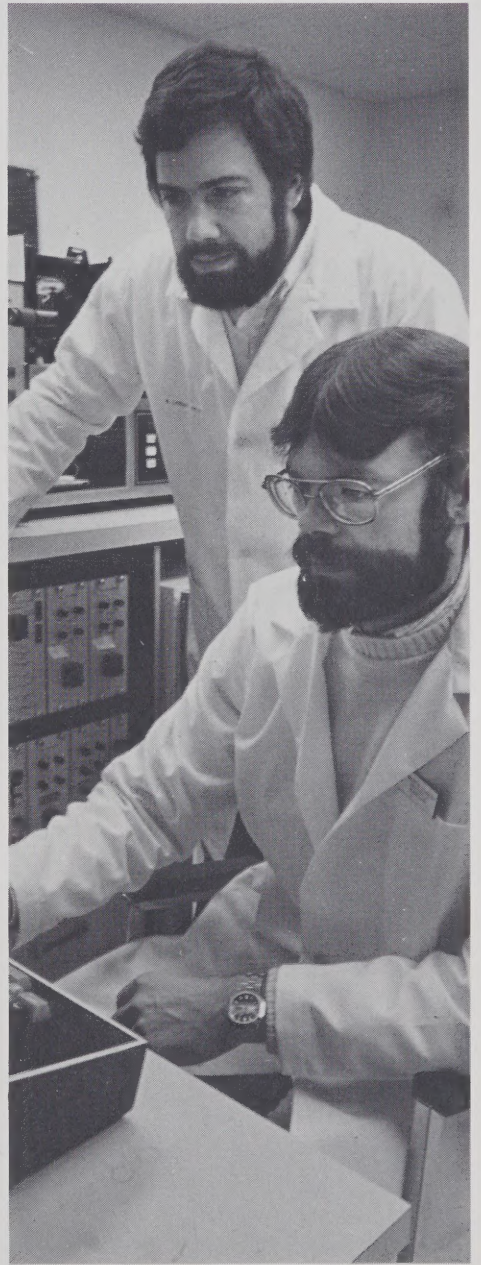
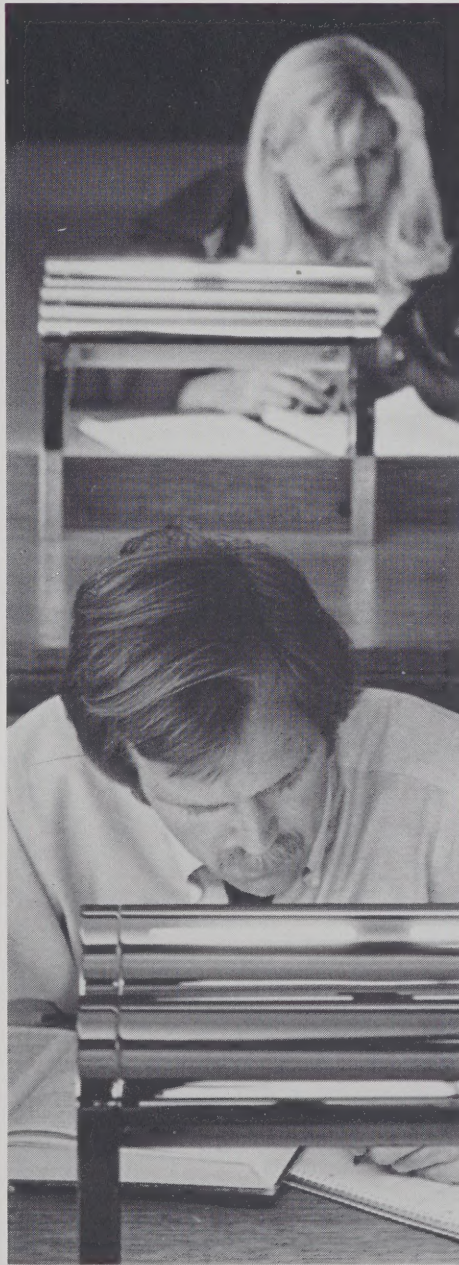


# RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER

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## Graduate Medical Education 1993-95



Rush University  
Presbyterian-St. Luke's Hospital



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**1993-95**

**Graduate Medical Education**

**Rush-Presbyterian-St. Luke's  
Medical Center**

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**Rush University  
Rush-Presbyterian-St. Luke's Medical Center**

**Office of Graduate Medical Education  
Rush-Presbyterian-St. Luke's Medical Center  
600 South Paulina Street  
Chicago, Illinois 60612**

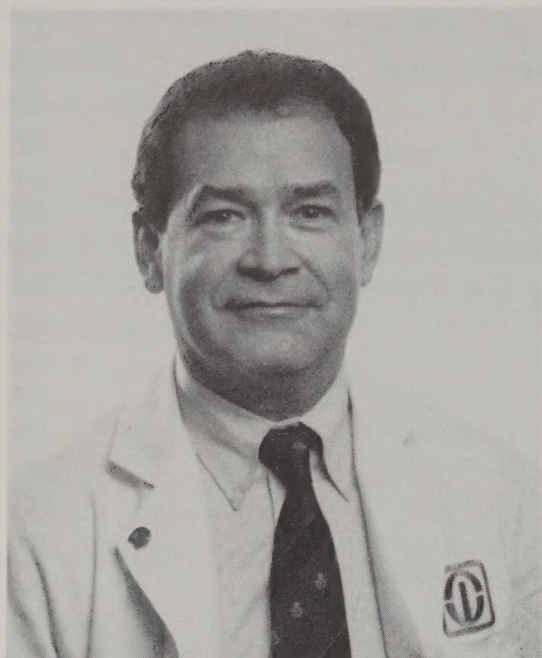


<hr/> <b>Contents</b> <hr/>	<b>The Medical Center</b> .....	<b>6</b>
<hr/> <b>Medical and Surgical Services</b> <hr/>	Anesthesiology ..... Cardiovascular/Thoracic Surgery ..... Dermatology ..... Diagnostic Radiology and Nuclear Medicine ..... Section of Breast Imaging ..... Section of Computed Tomography ..... Section of Gastrointestinal Radiology ..... Section of Medical Informatics ..... Section of Interventional Radiology ..... Section of Magnetic Resonance Imaging ..... Section of Musculoskeletal Radiology ..... Section of Neuroradiology ..... Section of Nuclear Medicine ..... Section of Pediatric Radiology ..... Section of Thoracic Radiology ..... Section of Ultrasound ..... Section of Urologic Radiology ..... Family Medicine ..... Section of Research and Education Development ..... General Surgery ..... Section of Colon and Rectal Surgery ..... Section of Dentistry ..... Section of Pediatric Surgery ..... Section of Transplantation Surgery ..... Immunology/Microbiology ..... Program in Allergy and Clinical Immunology ..... Internal Medicine ..... Section of Cardiology ..... Section of Critical Care Medicine ..... Section of Digestive Diseases ..... Section of Emergency Medicine ..... Section of Endocrinology and Metabolism ..... Section of General Internal Medicine ..... Section of Geriatric Medicine ..... Section of Hematology ..... Section of Infectious Disease ..... Section of Nephrology ..... Section of Medical Oncology ..... Section of Pulmonary Medicine ..... Section of Rheumatology ..... Neurological Sciences ..... Neurological Surgery .....	12 13 14 16 17 17 18 18 18 19 19 19 19 20 20 20 21 21 23 24 26 26 26 26 27 27 28 30 31 31 32 32 33 33 34 34 35 35 37 37 37 38 39



Obstetrics and Gynecology .....	40
Section of Ambulatory Reproductive Health Care .....	41
Section of General Gynecology .....	42
Section of Gynecological Oncology .....	42
Section of Maternal-Fetal Medicine .....	43
Section of Obstetrics and Gynecology Research .....	44
Section of Psychosomatic Obstetrics and Gynecology .....	44
Section of Reproductive Endocrinology and Infertility .....	44
Section of Urogynecology .....	45
Ophthalmology .....	46
Orthopedic Surgery .....	47
Section of Orthopedic Oncology .....	49
Section of Spinal Surgery .....	49
Section of Sports Medicine .....	50
Section of Orthopedic Research .....	51
Otolaryngology and Bronchoesophagology .....	52
Section of Communicative Disorders .....	53
Pathology .....	54
Pediatrics .....	55
Division of General Pediatrics .....	57
Section of Allergy/Clinical Immunology .....	57
Section of Pediatric Cardiology .....	58
Section of Gastroenterology and Nutrition .....	58
Section of Genetics, Endocrinology and Metabolism .....	58
Section of Pediatric Hematology/Oncology .....	58
Section of Infectious Diseases .....	59
Section of Intensive Care .....	60
Section of Neonatology .....	60
Section of Pediatric Nephrology .....	60
Section of Pediatric Neurology .....	61
Section of Pediatric Psychology .....	61
Section of Pulmonary Diseases .....	61
Section of Pediatric Surgery .....	61
Physical Medicine and Rehabilitation .....	62
Plastic and Reconstructive Surgery .....	64
Section of Hand Surgery .....	66
Psychiatry .....	66
Psychology & Social Sciences .....	68
Therapeutic Radiology .....	69
Section of Radiation Oncology .....	70
Section of Medical Physics .....	70
Section of Radiation Biology .....	71
Urology .....	72
<b>Organization of the Medical Center .....</b>	<b>74</b>





Leo M. Henikoff, M.D.  
*President and Chief Executive Officer*

New residents reinvigorate an institution such as ours. My predecessor liked to say that each new group of residents created a positive information balance, bringing much more than they took away. We are delighted that you believe that your graduate medical education could not be in an environment more conducive to learning. In addition, I hope that you will find the environment stimulating to your professional and personal development. Here at Rush, outstanding practitioners and scholars share a wealth of knowledge born of hands-on experience and research. The primacy of patient care is woven into the very fabric of the Medical Center and its richly diverse operations and activities. In November of 1985, the Board of Trustees ratified a revised mission statement for the Medical Center that reaffirms quality care as the focal point of our activities.

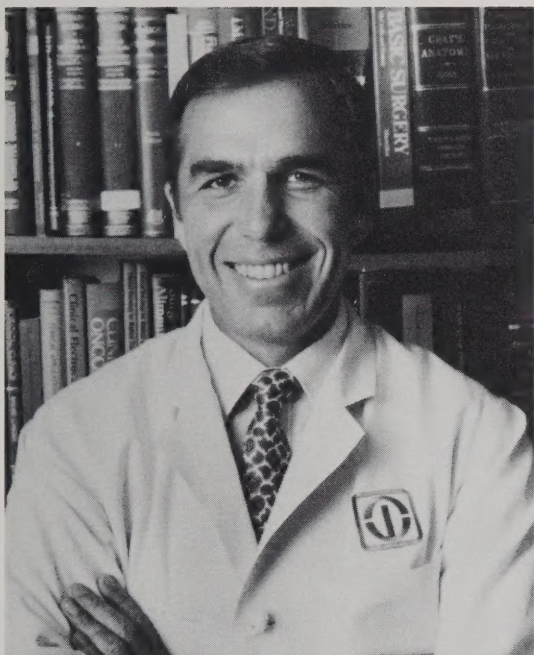
In this changing health care environment, patient care itself has begun to migrate away from hospital-based delivery to an array of outpatient settings. The Medical Center has been a leader in this regard and has undertaken a number of initiatives that, together with its outstanding resources in advanced technology and its distinguished professional staff, provide house staff with opportunities to round out their experience through participation in nonhospital care with special relevance for their future practices.

We are all very busy. I hope that you will take the time to reflect on the goals that you set for yourself in embarking on your medical career years ago. The pressures of undergraduate medical education can at times cause you temporarily to lose sight of the motivation that has truly been the source of the aspiration to become a physician—caring for the well-being of patients. This is, in fact, precisely what we are about.

My welcome to you is sincere. I hope that you feel welcomed by our institution and make the best use of these postgraduate educational years.

Leo M. Henikoff, M.D.  
*President and Chief Executive Officer*





Roger C. Bone, M.D.  
*Vice President, Medical Affairs*  
*Dean, Rush Medical College*

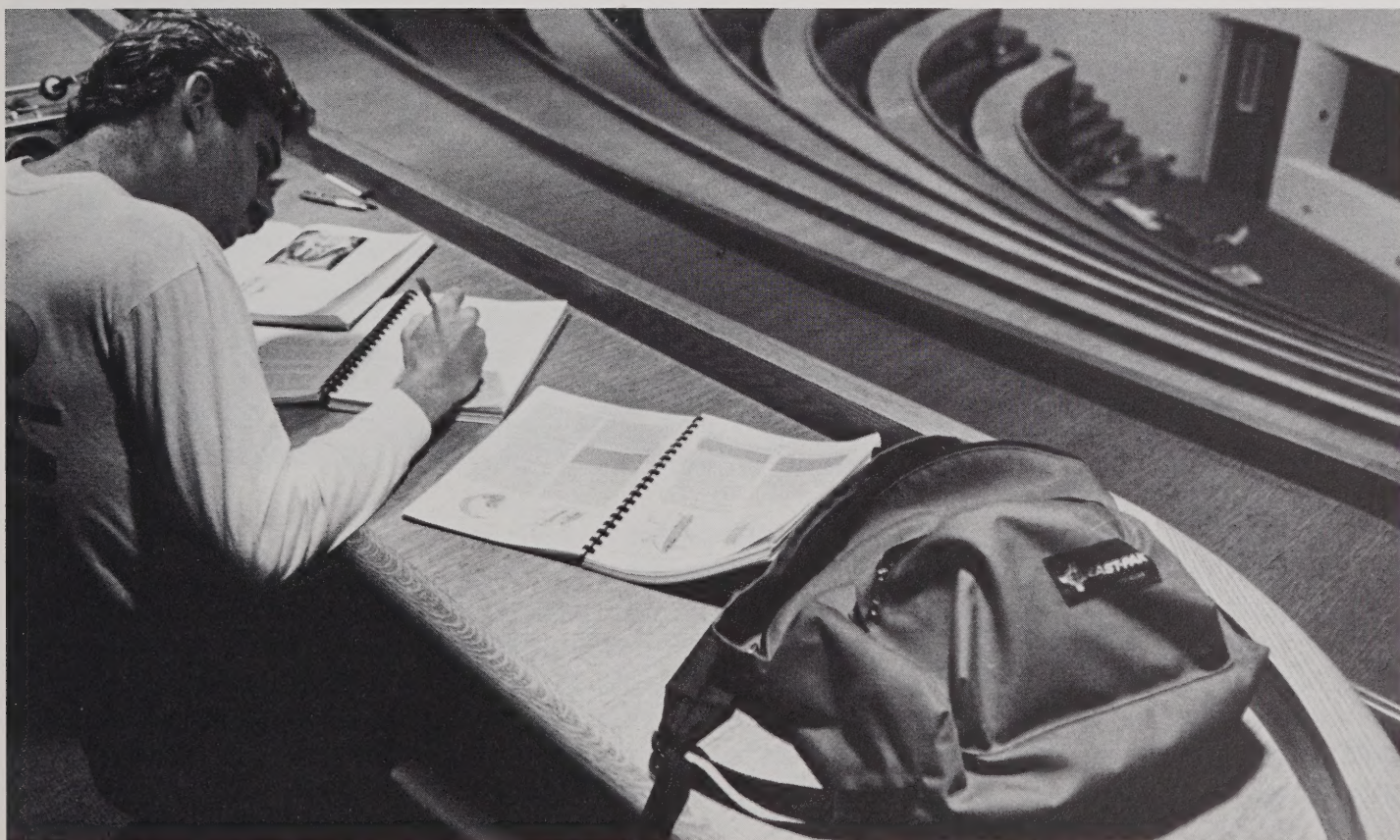
**A**t Rush Medical College, patients are central. Excellence in patient care is the basis of an instructional experience that emphasizes the educational process and the cultivation of lifelong habits of learning.

Our outstanding faculty, attending medical staff, and resident house staff are all integral to the teaching program. Superbly equipped facilities and a diverse patient population provide a spectrum of opportunities for the development of fundamental skills and knowledge.

Rush-Presbyterian-St. Luke's Medical Center is responsive to the needs of society for ever-improving health care, manpower development, and education in the health professions. We have nurtured the growth of a vertically integrated multi-institutional system that provides for the total health care needs of a large and varied population. Our growing system is managed flexibly to remain responsive to the needs of those we serve.

Rush-Presbyterian-St. Luke's Medical Center is a dynamic institution—one that is a leader in both the private and public sectors. You are invited to join us.

Roger C. Bone, M.D.  
*Vice President, Medical Affairs*  
*Dean, Rush Medical College*







**The  
Medical  
Center**



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**Introduction**

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Rush-Presbyterian-St. Luke's Medical Center offers training in 22 clinical departments to more than 500 residents, trainees, and fellows each year. Presbyterian-St. Luke's Hospital provides the major clinical base for our graduate medical education programs. The hospital is a national referral center and a community resource. More than a dozen other institutions affiliated with Rush University provide complementary and supplementary opportunities for the trainee in rural, semirural, suburban, and urban environments.

The 1,054 active members of the medical staff are on the faculty of Rush University, as are many of the attending physicians at our affiliated hospitals. The University's faculty includes more than 3,000 clinicians and scientists.

Many members of the attending staff at Presbyterian-St. Luke's have private practice offices located in one of the professional buildings on campus. Postgraduate training in many departments includes opportunities to follow patients in these offices.

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**History of the Medical Center**

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The traditions of Rush-Presbyterian-St. Luke's Medical Center began with Rush Medical College, which graduated over 10,000 physicians from its founding in 1837 until it suspended its activities in 1942. The graduates and the faculty of Rush played major roles in the establishment of the medical schools of both Northwestern University and the University of Chicago.

In 1883, at the urging of the Rush faculty, Presbyterian Hospital was founded as the first voluntary hospital in the country built for the patients and students of an academic medical facility. In 1956, Presbyterian Hospital merged with another long-established, community-based hospital, St. Luke's, to form Presbyterian-St. Luke's Hospital.

In 1969, an incorporation joined the charters of the inactive Rush Medical College and the hospital to form Rush-Presbyterian-St. Luke's Medical Center. The medical college resumed activities shortly thereafter, admitting students in 1971.

Rush University was created in 1972 when the College of Nursing joined Rush Medical College. These two colleges were joined by a third, the College of Health Sciences, in 1975. The Graduate College, formerly positioned within the College of Health Sciences, was established as a freestanding graduate college in 1981.

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**Facilities**

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Now with more than 150 years of service to Chicago and the Midwest, Rush Presbyterian-St. Luke's Medical Center is widely recognized as one of the nation's leading academic health centers. Its primary mission—to provide high quality, compassionate, comprehensive health care to all patients—is accomplished through its many highly skilled and specialized professionals, extensive services and programs, and numerous facilities both at the Medical Center's main campus and at some 30 locations throughout the Chicago area.

The Rush System for Health radiates from the Medical Center's 33-acre campus on the near West Side where are located Presbyterian-St. Luke's Hospital with 912 beds, Rush University with its four colleges, and the Johnston R. Bowman Health Center for the Elderly, a 176-bed geriatric rehabilitation hospital. Here also are found most of the 7,500 physicians, nurses, scientists, faculty and supporting staff; a number of specialty centers that coordinate treatment, research, and education, among them the Rush Cancer Center, the Multiple Sclerosis Center, the Thomas Hazen Thorne



Bone Marrow Transplant Center of Rush Presbyterian-St. Luke's Medical Center, and the Rush Alzheimer's Disease Center; and major research facilities which support more than 1,400 active research projects.

In addition, the Medical Center's patient care resources include two hospitals integrated into the Rush System (Copley Memorial Hospital, Aurora, and Rush North Shore Medical Center, Skokie) and a joint venture affiliation with Holy Family Hospital (Des Plaines). They also include the Rush Presbyterian-St. Luke's Health Plans, Inc. (RUSH Anchor, a health maintenance organization; RUSH Access, an independent practice association; RUSH Contract Care, a preferred provider organization; and RUSH Occupational Health, a network of industrial health care centers), as well as Rush Home Health Services and satellite offices in River City and the Northwestern Station Atrium Building. The Medical Center is also affiliated with 12 hospitals in Illinois and Indiana and with 18 colleges and universities in six states.

The Medical Center is a leader in the health care field, achieving national and international recognition for its exciting discoveries evolving out of research projects and for its innovative treatment programs that respond to major health problems.

In addition to Rush-Presbyterian-St. Luke's Medical Center, the clinical network consists of:

Bethany Hospital, Chicago	212 beds
Central DuPage Hospital, Winfield	375 beds
Christ Hospital and Medical Center, Oak Lawn	827 beds
Elmhurst Memorial Hospital, Elmhurst	388 beds
Galesburg Cottage Hospital, Galesburg	265 beds
Grant Hospital of Chicago, Chicago	500 beds
LaGrange Memorial Hospital, LaGrange	274 beds
LaPorte Hospital, LaPorte, Indiana	227 beds
Marianjoy Rehabilitation Center, Wheaton	110 beds
St. Mary's Hospital, Streator	248 beds
Swedish Covenant Hospital, Chicago	343 beds
West Suburban Hospital Medical Center, Oak Park	370 beds

Patient Care

Active Medical Staff	1,054
Presbyterian-St. Luke's Hospital	
Bed capacity (excluding bassinets)	912
Total admissions (including newborn)	26,554
Total days patient care (including nursery)	218,831
Occupancy	78.4%
Emergency room visits	37,077
Blood transfusions	45,287

Johnston R. Bowman Health Center for the Elderly

Bed capacity	176
Total days patient care	46,477



G1	G2	G3	G4	G5	G6	G7
Family Practice			Peds. Specialties	Allergy-Immun.	Med. Specialties	
Pediatrics						
Internal Medicine						
Physical Medicine & Rehab.						
Dermatology						
Neurology						
Psychiatry						
Pathology						
Obstetrics-Gynecology						
Anesthesiology						
General Surgery			Plastic			
			CV-Thoracic			
Urology						
Otolaryngology						
Neurosurgery						
Orthopedics						
Ophthalmology						
Therapeutic Radiology						
Diagnostic Radiology*						

\*G1 requirement: Transitional/General Medicine/or General Surgery

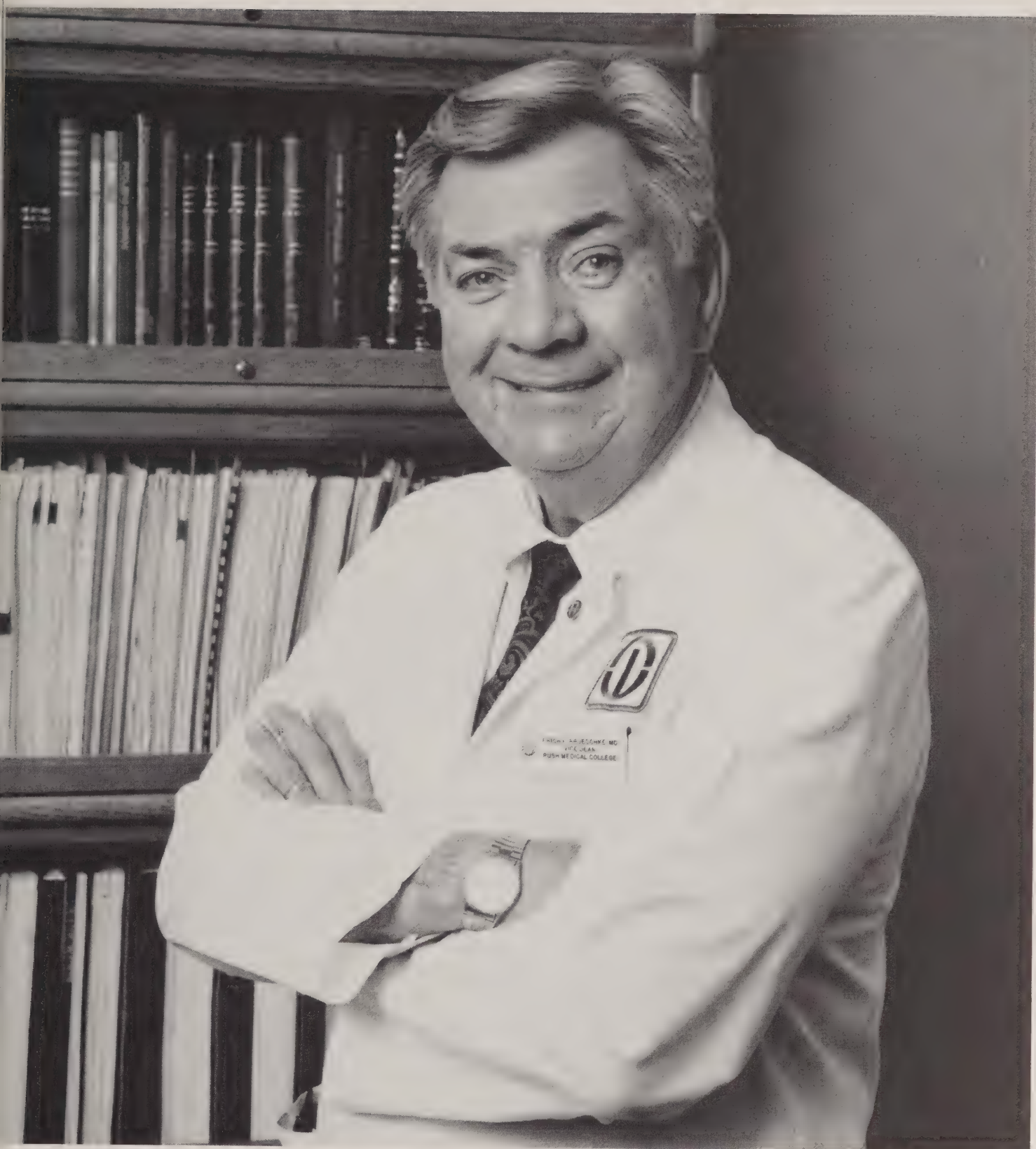


<hr/> <b>Rush University</b> <b>(Rush Medical</b> <b>College, College of</b> <b>Nursing, College of</b> <b>Health Sciences,</b> <b>The Graduate</b> <b>College)</b> <hr/>	Faculty	3,082
	Student body (including house officers)	1,806
	For a complete list of Rush Medical College faculty, see the Rush University Bulletin.	

<hr/> <b>Research</b> <hr/>	<p>Opportunities are available for house officers to participate in master’s and doctoral programs in conjunction with their graduate medical education. Approximately five percent of the current Medical Center budget is devoted to research, and the proportion is growing. The commitment has involved annual expenditures of more than \$26 million, funded by private agencies, foundations, corporations, federal and state agencies, and individuals.</p> <p>The Medical Center has a number of interdisciplinary committees for patient care, in which physicians, surgeons, scientists, psychologists, nurses, and other health professionals develop integrated therapies for patients with diseases such as multiple sclerosis, rheumatoid arthritis and Alzheimer’s disease. The interdisciplinary approach also is used in the research areas, especially in the approaches to cancer, cardiovascular diseases, and orthopedics. House officers are encouraged to take an active role in the continuing exchange of information and insight.</p>	
	Research projects in progress	1,471
	Research publications	1,560
	Research awards, 1991-92	\$26,760,822

<hr/> <b>Programs in</b> <b>Graduate Medical</b> <b>Education</b> <hr/>	<p>Graduate medical education programs offered at Rush, along with the minimum requirements for specialty board certifications, are shown on the chart on page 9. All G-1 positions are offered through the National Resident Matching Program.</p> <p>Residency programs in obstetrics and gynecology, orthopedics, general surgery, pediatrics, and family practice are fully integrated with those at network hospitals. In addition, under the terms of the Medical Center’s affiliation agreement with Presbyterian/St. Luke’s Healthcare System in Denver, Colorado, Rush residents may be able to undertake clinical rotations at the Denver-based teaching hospital.</p> <p>Recruitment for residency and fellowship positions at Rush is handled by individual department chairmen. Inquiries about programs and requests for applications should be addressed to them (see program descriptions that follow).</p>	





## **Medical and Surgical Services**

**Erich E. Brueschke, M.D.**  
Vice Dean, Rush Medical  
College, and Associate Vice  
President, Medical Affairs



## Department of Anesthesiology

**Anthony D. Ivankovich, M.D.,  
The William Gottschalk, M.D.,  
Professor of Anesthesiology  
and Chairman**

The Department of Anesthesiology's four-year residency program offers an integrated and progressive clinical experience that provides residents with a broad scientific background and the clinical expertise necessary to excel in anesthesiology for the rest of their professional lives. The program, which is approved by the American Board of Anesthesiology, has a house staff of 41 residents.

To accomplish these goals in conjunction with the requirements of the American Board of Anesthesiology, the program is divided into a clinical base year (PG-1) and clinical anesthesia training years (CA-1, CA-2, CA-3). After a month of orientation to the field of anesthesiology, the first-year resident begins a clinical base year designed to provide a solid background in the fields of medicine that interact with anesthesiology.

During this first year, residents train in medicine, surgery, pediatrics, and other fields that are important to anesthetic practice. After four months of mandatory rotations in internal medicine and/or surgery, residents train in such specialized areas as cardiology, pulmonary medicine, surgical intensive care, thoracic surgery and bronchoscopy, and high-risk neonatology. Thus the clinical base year should give residents the background necessary to deal with the respiratory, cardiovascular, and other medical problems that are often faced in anesthetic practice.

Residents are given increasing responsibilities during the clinical anesthesia training years (CA-1, CA-2, CA-3), while under the direct supervision of the academic staff, in the management of patients undergoing anesthesia in the operating room, the labor and delivery suite, and special care areas, such as radiology and the neonatal intensive care unit. Residents are also assigned to anesthesia specialty areas, such as neurosurgery, cardiovascular surgery, ob-

stetrics, the surgical intensive care unit, and the Rush Pain Center. Residents are supervised on a one-on-one basis by a member of the faculty during early training and for complex cases.

The resident's fourth year of training (CA-3) follows the guidelines set forth by the American Board of Anesthesiology but is flexible enough to meet the individual needs of the resident to complete training and prepare for practice. Depending upon previous performance and anticipated practice needs, the resident and program director collaborate to select one of the three tracks designated as the Advanced Clinical Track, Subspecialty Clinical Track, or Clinical Scientist Track. Regardless of the track selected, residents in the CA-3 year are assigned to difficult and complex anesthetic procedures and to seriously ill patients. Senior residents may also be assigned to the department's Pain Center, research, or ongoing kidney, liver, or heart transplant programs. In addition, residents who choose to take the Clinical Scientist Track in the CA-3 year, followed by six months of additional research, may receive a Master of Science Degree in Pharmacology.

Our department's research efforts encompass both basic sciences and clinical investigation. Residents are encouraged to participate in research at all levels of their training. Some of the department's ongoing laboratory investigations include developing a new noninvasive method to determine cardiac output and vascular dynamics, a chronic atherosclerotic swine model for the study of anesthetic effects on the aging myocardium, and a model for the development of new anxiolytic agents, and studies of the role of anesthetic agents and dosages on epileptic seizures, mechanisms of local anesthetic cardiotoxicity, novel methods of drug delivery, the use of the thromboelastogram for the diagnosis of experimental coagulopathies, the role of alkalinization in respiratory acidosis, and the use of anesthetics and adjunct agents in an animal model of supraventricular tachyarrhythmias.



Clinical areas of investigation focus on the safety, efficacy, and epidemiologic effects of anesthesia and pain management. Clinical studies include the effects of anesthetics on morbidity and mortality following open-heart surgery, reducing nausea and vomiting postoperatively, the effects of anesthetic induction agents on intraocular pressure, the use of thromboelastography to assess coagulation status after open-heart and peripheral vascular surgery, and the use of continuous epidural local anesthetic-narcotic infusion for postoperative pain management.

A three-hour didactic lecture series held every week throughout the three years of clinical anesthesia training forms the core of our residents' aca-

demic program. These lectures are supplemented with weekly grand rounds, tutorials, lectures by visiting professors, a journal club, participation in the Illinois Society of Anesthesia Study Commission, and the meetings of the Chicago Society of Anesthesiology. The resulting program is highly structured both inside and outside the operating theater.

The Department of Anesthesiology combines an academic environment with an excellent clinical experience that prepares residents for their future roles as consultants and practitioners of anesthesiology. Inquiries concerning the program should be directed to Anthony D. Ivankovich, M.D., Chairman, in care of Donna Ritacco, Education Coordinator.

**Hassan Najafi, M.D., The Mary and John Bent Professor of Cardiovascular-Thoracic Surgery, Chairman and Director, Section of Cardiovascular Surgery**  
*C. Frederick Kittle, M.D., Director, Section of Thoracic Surgery*

The Department of Cardiovascular/Thoracic Surgery offers two- and three-year residency programs in cardiac, thoracic, and vascular surgery accredited by the American Medical Association. The three sections of the programs have separate patient care functions but share a strong common goal in training. Two residents are appointed each year on July 1. Completion of an approved surgical residency program and eligibility for examination by the American Board of Surgery are prerequisites for consideration. Once residents have successfully completed their training requirements they are eligible for examination by the American Board of Thoracic Surgery. Residents accepted for an additional year in vascular surgery are eligible for certification of added qualification in vascular surgery through examination by the American Board of Surgery.

The focus of the department's training is to provide residents with an op-

portunity to obtain progressive education in the fields of cardiac, vascular, and thoracic surgery and to encourage clinical research and publication of results.

The major clinical rotations include three months of training at Children's Memorial Hospital in Chicago, nine months of senior responsibilities in general thoracic surgery, and 12 months of senior assignments in adult and congenital cardiac surgery. One year of senior responsibility in peripheral vascular surgery is included in the vascular surgery program.

All patients admitted to the service are available to the teaching program. Daily rounds, which are conducted by attending physicians, provide excellent training in bedside clinical diagnosis. The department sees approximately 3,000 patients each year. Open-heart procedures, abdominal aneurysmectomy, aortic bifurcation, grafting, carotid endarterectomy, femoral-popliteal bypass, and thoracic aortic aneurysm are just a few examples of procedures performed in the cardiovascular surgery section. In thoracic surgery, common procedures include segmentectomy, lobectomy, pneumonectomy, decortication bronchoplasty, and sleeve resection.

At formal cardiovascular-thoracic conferences held each week, cases of

## Department of Cardiovascular/ Thoracic Surgery





interest are presented by participating institutions from the city and suburbs. A journal club meets weekly, and once a month residents have the opportunity to meet invited professors. There is a monthly didactic session in vascular surgery, and all residents are given an opportunity to learn vascular diagnostic techniques in the department's noninvasive vascular laboratory. Thoracic radiology and pathology are taught by informal instruction and regularly scheduled conferences. Residents are encouraged to submit papers for publication and presenta-

tion to national societies and journals. In addition, residents can choose to attend the scientific sessions of the Society of Thoracic Surgeons, the American Association for Thoracic Surgery, or the Society of Vascular Surgery.

Within the department, several programs are readily available to interested residents. If residents choose to spend one year in the laboratory prior to clinical education, they can acquire a master's degree.

Inquiries concerning the program should be directed to the chairman.

***Roger W. Pearson, M.D.,  
Professor and Acting Chairman***

The Department of Dermatology offers a three-year residency training program that is fully accredited by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Dermatology. The program accommodates a total of four residents. One new resident is accepted for each of two years and two are accepted every third year. Appointments are made only through the National Dermatology Matching Program. The focus of training is the

prevention, pathogenesis, diagnosis (including the histopathologic and immunopathologic diagnosis), and treatment of skin diseases.

The program puts special emphasis on associations and relationships between systemic disease and skin disease, and stresses understanding normal skin care as it relates to preventive dermatology. The tutorial method of clinical teaching is intensively applied and enhanced by a favorable staff-to-trainee ratio (there are four full-time and 18 part-time volunteer staff members).

During the first year, the resident

**Department of  
Dermatology**



participates in the outpatient service by making initial contact with new patients and discussing differential diagnostic and therapeutic regimes under the supervision of the attending physician. The resident learns routine and special diagnostic procedures, such as biopsies and minor excisions, patch testing, dark field examination, and KOH examination for fungi. The resident gradually assumes more responsibility for patient care. Each hospitalized patient is assigned to a specific resident who is responsible for organizing the workup and treatment. Second-year residents assume greater independence and assist in the clinical training of medical students and residents from other services. Third-year residents assume additional responsibilities and present lectures and conduct other formal teaching sessions for medical students, other health sciences students, and practitioners. Some department administrative duties pertaining to the resident training program, such as clinic assignments and schedules, and organizing seminars, are assigned to the chief resident.

Annually, the Department of Dermatology sees approximately 11,000 outpatients and 5 to 10 inpatients, and receives over 700 referrals for inpatient hospital consultations. Consultations on inpatients and emergency room patients are initially conducted by the resident on call and presented to the attending staff member.

Clinical experience encompasses a broad spectrum of problems, including cutaneous infections, severe blistering diseases and drug eruptions, psoriasis and other major dermatoses, cutaneous malignancies, connective tissue diseases, and complicated diagnostic problems. The department is a major referral center for the greater Chicago area. Specialty clinics include the pigmented-lesion and skin-surgery clinics where both routine and more complicated procedures, such as hair transplantation,

scalp reductions, dermabrasion, flap rotations, and sclerosing chemotherapy, are performed. Residents are also trained in the administration of phototherapy.

Special programs include weekly histopathology conferences and a lecture series on the topics of radiation therapy, phototherapy, mycology, and various dermatological basic sciences. There are also weekly journal club meetings and book review sessions. Third-year dermatology residents have the opportunity to rotate to other services in the institution. Cases involving interesting diagnostic, treatment, or other problems are presented and discussed at monthly staff conferences. Residents also attend the monthly meetings of the Chicago Dermatological Society. They may also attend national and regional dermatological meetings and other scientific meetings. The department is actively involved in clinical and basic research; interested residents have the opportunity to participate in these activities during the residency training period.

To measure each resident's progress annually, the American Board of Dermatology provides in-training board examinations for residents enrolled in accredited dermatology programs. We require residents to participate in these annual proctored exams, which are consultant-graded and compare percentile scores with those of residents at the same level of training in all other training programs. The board requires that surgery and special procedures logs be maintained and submitted annually by each resident and that individual resident evaluations, tailored to each level of training, be sent to the board office at the end of each training year. These evaluations are based on the standards for certification established by the American Board of Dermatology and the standards for resident training established by the Accreditation Council for Graduate Medical Education.



## Department of Diagnostic Radiology and Nuclear Medicine

**Jerry P. Petasnick, M.D.,**  
**Chairman**  
*Ernest W. Fordham, M.D.,*  
*Associate Chairman*  
*Robert A. Kubicka, M.D.,*  
*Associate Chairman*  
*Claire Smith, M.D., Director,*  
*Postgraduate Residency*  
*Training Program and Medical*  
*Student Elective Clerkship*

The Department of Diagnostic Radiology and Nuclear Medicine provides consultation for over 200,000 patient examinations each year. All routine radiographic work is put on display daily within each subspecialty section for interpretation, consultation, and teaching. Special display areas are also located in other areas of the Medical Center. Outpatients of private physicians are examined in private radiologic offices in the Professional Building, located across from the hospital. Radiology residents receive their training at Presbyterian-St. Luke's Hospital and at Affiliated Radiologists, S.C., in the Professional Building on the Rush campus.

State-of-the-art equipment is provided for all standard radiographic, fluoroscopic, and special procedures. The special procedures suite contains single and biplane filming, and has digital subtraction capabilities for performing neurologic, peripheral, and interventional angiographic procedures.

The computed tomography suite houses two state-of-the-art multipurpose scanners with multidimensional reconstruction capabilities for imaging of the brain, spine, and body.

The ultrasound section contains five state-of-the-art scanners. Three have Doppler capabilities; one has color Doppler capabilities. A transrectal machine is dedicated to the evaluation of the prostate and distal large bowel. A portable machine with a specialized high frequency "T"-shape transducer is routinely used in the operating room.

The magnetic resonance imaging center currently houses two superconductive magnets (0.5 and 1.5 Tesla) for clinical care and research. The center contains its own display

center, conference room, and research space.

A radiology information system is being installed and integrated into the hospital-wide information system to further enhance clinical services and care. A computer laboratory located within the Department of Radiology is available for further research and clinical support.

The Department of Diagnostic Radiology and Nuclear Medicine offers four positions annually in a four-year residency program in diagnostic radiology. The program is accredited by the Accreditation Council for Graduate Medical Education. After taking a clinical year, applicants for the four-year program are accepted through the National Residency Matching Program.

Inquiries regarding the program should be directed to Claire Smith, M.D., Director, Postgraduate Radiology Residency Training Program.

Postresidency fellowships are available in neuroradiology, combined computed tomography/ultrasound/magnetic resonance imaging, nuclear medicine, and interventional radiology. Inquiries for fellowships should be directed as follows: Neuroradiology—Michael S. Huckman, M.D.; Body Imaging—David Turner, M.D.; Interventional—T.A.S. Matalon, M.D.; and Nuclear Medicine—E. Fordham, M.D.

Beginning with the first year of training, the resident is responsible for the interpretation of all radiography and the performance of every special procedure in the department. Every film interpretation, however, is checked by an attending staff member from the appropriate section, and every special procedure is supervised throughout its duration by a specialty radiologist. Various degrees of responsibility are delegated during the training program. Residents play an active role in teaching medical students who rotate through the various clerkship rotations provided by the department. These include: Diagnostic Radiology (Rad 601), Interventional Radiology (Rad 611), Correlative Imaging (Rad 612), and Pediatric Radiology (Ped 631).



The department holds teaching conferences daily, and radiology grand rounds and a chairman's conference weekly. The department also provides radiologic consultation at various hospital-wide conferences, medical grand rounds, pediatric grand rounds, a clinical pathologic conference, a tumor board, and semi-weekly autopsy conferences.

Each section maintains its own collection of teaching material. The Fay H. Squire Memorial Radiological Library is located within the department. The American College of Radiology teaching file is kept locked, available only to residents in an on-site departmental conference room.

All diagnostic radiologists and residents are urged to attend the scientific meetings of the Chicago Radiological Society, which are held six times a year. Time is made available for all residents to attend refresher courses at the annual convention of the Radiological Society of North America.

The full-time staff is comprised of 28 radiologists. For administrative and teaching purposes, the department is divided into 13 sections. Each section has a full-time director, and each member of the staff is assigned to one of the sections, as follows:

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## Section of

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### Breast Imaging

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#### *Peter Jokich, M.D., Director*

The Section of Breast Imaging is responsible for the technical performance and interpretation of all breast imaging examinations and procedures. Although mammography is the primary focus of the section, breast ultrasound, ductography, pneumocystography, and preoperative needle localization of breast lesions are also performed when necessary. The section is also involved in educational endeavors and research activities related to breast imaging and breast cancer diagnosis.

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## Section of

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### Computed Tomography

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#### *Bruce Silver, M.D., Director*

As its name implies, computed tomography is a computer-based imaging modality that uses a rotating x-ray





tube and detectors to acquire cross-sectional images of the body. Images are usually obtained in the axial plane; however, computer manipulation reconstructions can be made in a number of planes. Newer software now allows for 3-D reformatting as well as subtraction of overlying soft tissue and bone. Neurosurgical procedures have benefited dramatically from this latest advancement.

Scans can be performed with or without oral or intravenous contrast. CT angiography of the liver can be performed via a catheter placed percutaneously in the hepatic blood supply.

Biopsies of the lung, abdomen, pelvis, and bone are routinely performed with CT guidance. Certain drainage procedures are also facilitated by CT guidance.

Recent developments include slip-ring technology, which allows for extremely fast scanning. This technique reduces breathing artifacts and allows for more precise timing of infusion scans.

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**Section of**

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**Gastrointestinal Radiology**

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***Claire Smith, M.D., Director***

Plain and contrast-enhanced radiographic and fluoroscopic studies of the abdomen and gastrointestinal tract, the gallbladder and biliary system, and the pancreas are performed in this section. Methods include routine biphasic examination of the upper alimentary tract and double-contrast examinations of the colon. Enterolysis studies of the small bowel are selectively performed. Special dynamic radiology studies of the distal rectum and anus during defecation are major areas of interest. Educational and research studies are under way in cooperation with the clinical disciplines of gastroenterology, general surgery, neurology, and speech pathology.

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**Section of**

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**Medical Informatics**

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***Laurens V. Ackerman, M.D.,  
Ph.D., Director***

This section provides direction in the evolution and management of our radiology information system (RIS) and our picture archiving and communication system (PACS). Along with the design and management of the multiple computer networks in the department, the section is concerned with computer connections inside and outside the department. It provides programming support to clinical and administrative areas in the department and conducts research into image analysis, artificial intelligence, PACS, RIS, computer networks, and computer systems.

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**Section of**

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**Interventional Radiology**

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***Terence A.S. Matalon, M.D.,  
Director***

The Section of Interventional Radiology is responsible for diagnostic and therapeutic intervention in both vascular and nonvascular settings. Examinations are usually performed by a resident and fellow with the supervision and assistance of an attending radiologist. In contrast to other areas in radiology, interventional radiology is a primary care discipline. The interventional radiology section is responsible for preprocedural evaluation performance and postprocedural follow-up with respect to specific clinical problems.



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**Section of**

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**Magnetic Resonance Imaging**

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*David A. Turner, M.D., Director*

The Section of Magnetic Resonance (MR) Imaging is responsible for the performance and interpretation of all MR imaging studies in adults, except for examinations of the head, neck, and spine. Application of MR imaging to diagnosis is rapidly increasing. In addition to studies of the central nervous system, studies of the musculo-skeletal system, pelvic organs, liver, and mediastinum are frequently performed at our institution. Examination of the cardiovascular system, including cinematic heart studies and MR angiography, is an area of active investigation.

The Department of Diagnostic Radiology and Nuclear Medicine offers a one-year, combined imaging fellowship in MR, computed tomography, and ultrasonography. Participants in this program spend a total of four months studying MR imaging; residents currently spend two months. In addition to a clinical teaching program characterized by intensive one-on-one interaction with attending MR subspecialists, trainees participate in a weekly MR "Physics for Physicians" seminar, a biweekly intersectional imaging fellows' conference, and a monthly MR journal club. Fellows and residents are encouraged to participate in the research activities of the section.

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**Section of**

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**Musculoskeletal Radiology**

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*John R. Charters, M.D., Director*

This section supervises the performance and interpretation of many of the radiologic studies involving the bones, joints, and soft tissues of the body (examinations using radioactive material and magnetic resonance fall

under the supervision of other sections). Plain film examination, conventional tomography, computed tomography, and arthrography come under this section. All examinations are initially undertaken and reviewed by one of the residents in training, but final interpretation is supervised by an attending radiologist.

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**Section of**

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**Neuroradiology**

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*Michael S. Huckman, M.D., Director*

This section is responsible for the following examinations: plain skull radiography, myelography, all head and neck arteriography and venography, and cranial and spinal CT and magnetic resonance imaging. The section also handles a significant volume of endovascular therapeutic procedures.

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**Section of**

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**Nuclear Medicine**

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*Ernest W. Fordham, M.D., Director*

The Section of Nuclear Medicine offers a two-year residency program in nuclear medicine accredited by the American Medical Association. After completing the program and two clinical years (unspecified), trainees are qualified to take the nuclear medicine board examination.

During the two-year program, trainees rotate through endocrinology, immunology, and special hematology for experience with in vitro studies. Special emphasis is placed on correlating imaging studies and understanding computer-assisted quantitative studies. Trainees who perform well are offered optional rotations in CT and ultrasonography.

The section also offers a one-year fellowship in nuclear medicine to ap-



plicants who have completed a diagnostic radiology residency. This program qualifies trainees for the special radiology board examination that recognizes exceptional competence in nuclear medicine.

The major educational activity of the Section of Nuclear Medicine is an informal case-reporting conference held daily, in which trainees actively participate in wide-ranging discussions that lead to a formal report. The formal didactic clinical lecture series includes speakers from other institutions. The lecture series, which covers radio-pharmaceuticals and pertinent physical sciences, is taught by a radio-chemist and physicists. Trainees are also required to attend a course in radiation biology that is given yearly.

Approximately 10,000 imaging procedures are performed annually on a wide range of modern imaging equipment, including dedicated SPECT cameras with triple head devices, scintillation cameras with whole-body systems and 24-inch wide detectors, and a battery of portable cameras. Every imaging device is mated with stand-alone computers which are tied into a central computer.

The major interests of the section include (a) the graphic demonstration of the whole-body distribution of radio-nuclides, including those primarily used for specific organ imaging, (b) continued development and evaluation of the computer-assisted studies, and (c) the clinical evaluation of commercial prototype equipment.

Trainees are actively encouraged but not required to undertake primary responsibility for their own research projects and/or participate in ongoing departmental projects. Trainees who are productive in this regard attend at least one out-of-town meeting at departmental expense.

Inquiries concerning these programs should be directed to the section director.

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## Section of

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### Pediatric Radiology

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***B. Kim Han, M.D., Director***

This section is responsible for imaging children under 16 years of age with multimodal techniques. This section performs plain radiographs, fluoroscopy examinations (including upper gastrointestinal tract studies, small bowel series, barium enema, excretory urography, and voiding cystourethrogram), ultrasound, CT, and MRI. Also performed are airway fluoroscopic examinations for children with sleep apnea. Portable ultrasound examinations of the head are performed regularly in the neonatal intensive care unit. The portable ultrasound examination is also used in the operating room to assist neurosurgeons during procedures.

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## Section of

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### Thoracic Radiology

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***Robert A. Kubicka, M.D.,  
Director***

This section is responsible for the interpretation of all standard examinations of the chest, including portable film studies and chest fluoroscopy, as well as the supervision and interpretation of computed tomographic scan sections of the chest.

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## Section of

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### Ultrasound

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***Bruce Silver, M.D., Director***

The Section of Ultrasound uses high-frequency sound waves to create images. Lack of ionizing radiation makes ultrasound the examination of choice in obstetrics.



However, the scope of diagnostic ultrasound is not limited to the fetus. Currently, almost every organ system of the body can be imaged by ultrasound. The addition of Doppler ultrasound and color-flow imaging has significantly enhanced the evaluation of arterial and venous vascular structures. Specialized endoluminal probes are now available for evaluation of the prostate and ovaries. Endoscopic ultrasound transducers and intravascular probes have recently been developed. Guided biopsies are routinely performed under ultrasonic guidance. The portability of ultrasonic equipment has led to intraoperative uses. High-resolution transducers are now being used for neurosurgical as well as intra-abdominal procedures.

## Department of Family Medicine

**Erich E. Brueschke, M.D.,**  
*Chairman and Program  
Director*

*William Schwer, M.D., Associate  
Chairman and Associate  
Program Director*

*Thomas Dent, M.D., Program  
Director and Director, Christ  
Hospital and Medical Center  
Family Practice Center*

*Steven Rothschild, M.D.,  
Co-Director, Internal Medicine  
and Family Practice Geriatrics  
Fellowship*

In order to train future teachers of family medicine, the Department of Family Medicine offers a postdoctoral three-year combined hospital residency, the Rush-Christ Residency in Family Practice, with an optional one-year fellowship.

The Rush-Christ Residency in Family Practice is a strong university-based program. Emphasis is on teaching and educational opportunities for the resident, combined with community-oriented training at Christ Hospital and Medical Center in suburban Oak Lawn. In addition, the department provides a number of opportunities for clinical and basic science research for residents at both the

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## Section of

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## Urologic Radiology

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**Suresh K. Patel, M.D., Director**

The Section of Urologic Radiology is responsible for performing and interpreting excretory urography, voiding cystourethrography, hysterosalpingography, vaginography, pull-out pyleography, percutaneous nephrostomy, renal angiography, adrenal arteriography, and venous sampling. The section also is responsible for workup of renal transplant patients and performs angioplasty of renal arteries and dilation of ureteral and urethral strictures.

Medical Center and Christ Hospital. The residency program is accredited by the Accreditation Council for Graduate Medical Education and the Residency Review Committee for Family Practice.

The sine qua non of family practice are the knowledge and skill that allow the physician to confront relatively large numbers of unselected patients and develop therapeutic relationships with these patients and their families over extended periods. The residency is structured to prepare the physician for this role. There are nine residency positions in each year of the program and one fourth-year fellowship.

During the first year, residents spend 20 weeks in internal medicine. They spend 8 weeks in the inpatient family practice service, and 12 weeks in pediatrics at Rush and Christ, where the resident trains in the inpatient ward and the nursery. Twelve weeks of rotation in obstetrics and gynecology are spent at Christ Hospital and Medical Center. The residents spend approximately one-half day per week seeing their own patients in the Christ Hospital and Medical Center Family Practice Center. Weekly conferences are held in the Family Practice Center.

In the second year, residents take 12 weeks of pediatrics at Rush Medi-





cal Center and Christ Hospital and Medical Center, where they train in the inpatient ward and emergency room and take a four-week elective. They take a four-week rotation in neurology, an eight-week rotation in general surgery at Grant Hospital, a six-week rotation in emergency medicine at Christ Hospital and Medical Center, and additional rotations in dermatology, behavioral medicine, alcoholism, orthopedics and otolaryngology/ophthalmology, urology, and occupational medicine. Residents spend two to three afternoons a week seeing their own patients in the Family Practice Center at Christ Hospital and Medical Center.

In the third year, the resident's inpatient experiences include approximately 12 weeks of required internal medicine electives, other electives to meet the needs of the

resident, and rotations in community medicine and geriatric medicine, and six-week rotations as the Family Practice Center resident and as the senior resident on the family practice in-service. Residents spend approximately 14 to 16 hours per week seeing their own patients in the Family Practice Center. Behavioral sciences and clinical psychology experiences are continuous over the three years.

This is a combined hospital residency program. All outpatient Family Practice Center training is at Christ Hospital and Medical Center where, for the entire three years, residents maintain continuity of care with their patients. A team approach is used. By the third year, each resident will be caring for about 250 families. The integration provides experiences at both a tertiary care academic medical center and a high-quality private practice,



community-oriented teaching hospital.

Each resident's program can be individualized through electives to meet personal interests, career objectives, and the clinical responsibilities to be faced in the community. Graduated responsibility is the prevailing objective—residents occupy their own offices and provide care to their own patients. Our approach to primary care uses a broad spectrum of health care professionals. This approach is strengthened by a full-time clinical psychologist and a medical social worker assigned to the center.

Conferences held at the Family Practice Center concern behavioral science topics, clinical research, office management, medical problem-solving, family practice grand rounds, geriatric medicine, and problem-oriented medical grand rounds. All important decisions that affect resident rotations and residency affairs are made jointly by faculty in consultation with residents. Monthly meetings bring together elected resident representatives from each year, the chief resident in family practice, and the faculty members.

Research interests among the department's faculty focus on a variety of primary-care and basic-science issues and are coordinated through the Section of Research and Education Development.

Address all inquiries to the chairman.

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## Section of Research and

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## Education Development

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***Cynthia M. Waickus, M.D., Ph.D.***

The Section of Research and Education Development is a major component of the Department of Family Medicine. This section was established with a grant from the U.S. Department of Health and Human Services Public Health Service, but it also has internal and external sources of funding for specific research projects. The section conducts a number of basic science, clinical, educational, and evaluational research projects. The department's faculty development program, which includes an annual workshop, is a key section responsibility. Research lectures and grant applications are also coordinated by this section.

Areas of continued interest and funding are immunologic probes for cancer screening, drug efficacy and testing, contraception, adolescent health, geriatric medicine, alcoholism intervention, the delivery of health care by family physicians, the impact of illness on the family, and the family physician's influence on lifestyle changes. Faculty members also design and implement a number of medical education projects.





## Department of General Surgery

**Steven G. Economou, M.D.,**  
*The Helen Shedd Keith*  
**Professor of General**  
**Surgery and Chairman**  
*Herand Abcarian, M.D.*  
*Jeffrey E. Anderson, M.D.*  
*Angel Bassuk, M.D., Head,*  
*Section of Pediatric Surgery*  
*Steven Bines, M.D., Director,*  
*Surgical Research Laboratory*  
*Anita S.F. Chong, Ph.D.*  
*John S. Coon IV, M.D., Ph.D.*  
*Frederic A. dePeyster, M.D.*  
*Daniel J. Deziel, M.D., Associate*  
*Coordinator, Resident Clinical*  
*Activities; Chief-Service I*  
*Alexander Doolas, M.D., Associate*  
*Chairman, Department of*  
*General Surgery; Director*  
*Undergraduate Surgical*  
*Education; Chief-Service IV*  
*Kambiz Dowlat, M.D., Director,*  
*Breast Cancer Research*  
*Unit*  
*Preston Foster, M.D.*  
*Howard Gebel, Ph.D.*  
*William M. Hopkins, M.D.,*  
*Chairman, Department of*  
*Surgery, Christ Hospital and*  
*Medical Center*  
*Stephen C. Jensik, M.D., Ph.D.*  
*Leon R. Kelleher, D.D.S., Director,*  
*Section of Dentistry*  
*Deborah S. Loeff, M.D., Associate*  
*Head, Section of Pediatric*  
*Surgery*  
*Janet L. Meller, M.D.*  
*Frederick Merkel, M.D.*  
*Keith Millikan, M.D., Liaison,*  
*Emergency Services*  
*Nahim H. Nasralla, M.D.,*  
*Chairman Emeritus, Department*  
*of Surgery, Christ Hospital and*  
*Medical Center*  
*Jack Roberts, M.D., Associate*  
*Program Director, Department of*  
*Surgery, Christ Hospital and*  
*Medical Center*  
*David L. Roseman, M.D.*  
*Theodore J. Saclarides, M.D.,*  
*Head, Section of Colon and*  
*Rectal Surgery; Associate*  
*Director, Residency Review*  
*Howard Sankary, M.D.*  
*William D. Shorey, M.D.*

*Edgar D. Staren, M.D., Associate*  
*Director, Surgical Research*  
*Laboratory*  
*Albert K. Straus, M.D., Ph.D.,*  
*Chief-Service II*  
*James W. Williams, M.D., The*  
*Jack Fraser Smith Professor of*  
*Surgery and Director, Section of*  
*Transplantation Surgery;*  
*Chief-Service V*  
*Thomas R. Witt, M.D.,*  
*Coordinator, Clinical*  
*Conferences; Chief-Service III*  
*Norman L. Wool, M.D.,*  
*Coordinator, Resident Clinical*  
*Activities*

The general surgery training program at Rush University is accredited by the Residency Review Committee for Surgery for five years of training. Seven five-year and six one-year appointments are available.

The educational program allows the trainee to obtain a well-rounded and progressive education in general surgery and in the basic principles of the surgical specialties. The program is integrated at Presbyterian-St. Luke's Hospital (PSLH) and Christ Hospital and Medical Center in Oak Lawn, and is affiliated with the Trauma Unit and Colo-Rectal Unit of Cook County Hospital in Chicago and with Rush North Shore Medical Center in Skokie.

The program is organized as follows: four general surgery services (including pediatric surgery) and the transplantation services at PSLH, three general surgery services (including thoracic surgery and pediatric surgery) and the peripheral vascular surgery service at Christ Hospital and Medical Center, two rotations at Cook County Hospital, and one rotation at Rush North Shore Medical Center.

First-year residents spend six months in general surgery, divided into three two-month rotations. In addition they spend one month each in cardiovascular/thoracic surgery, the emergency room, and the surgical intensive care unit. Two months are available for elective rotations in such specialties as plastic and reconstructive surgery, E.N.T., urology, or neurosurgery.



The second year of training completes the core training program in basic surgery. There are seven rotations: four in general surgery, one in orthopedic trauma, one at Rush North Shore Medical Center, and one at the Trauma Unit of Cook County Hospital. Second-year residents begin to participate in the teaching of medical students and first-year residents, with the assistance of senior residents and attending surgeons.

Assignments during the third year of residency are more flexible. There are two rotations on general surgical services as well as rotations to anesthesia and surgical pathology. Residents in the program are expected to initiate or participate in research projects. Resources are provided for such activity, which constitutes an important element in a resident's proper training. The project may be a four-month involvement in an ongoing study; it may be a yearlong project that extends the residency to six years; or it can be a minimum of two years of research leading to a Ph.D.

In the fourth year of the program, residents are engaged in full clinical activity, assuming increased responsibility for the primary management of patient care.

Each fifth-year resident spends the entire year as the chief surgical trainee on one of the general surgery services.

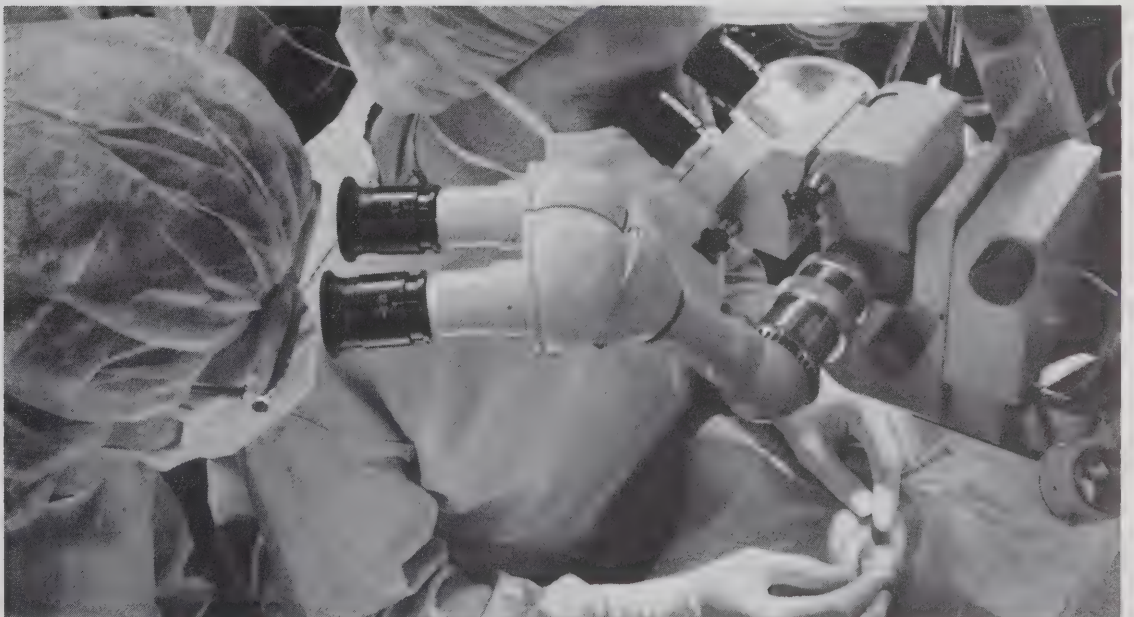
Every board-certifiable specialty in

surgery is represented in the program; this allows residents to interact with their peers from many disciplines during the care of patients.

Because Presbyterian-St. Luke's Hospital is a tertiary care institution, many of its patients have complex surgical problems. Accordingly, a large number of operations are performed within its new 24-room surgical suite, including some of the most sophisticated and advanced in surgery. Approximately 21,000 operations are performed annually at the parent institution.

Christ Hospital and Medical Center also has a large number of patients with surgical problems, a higher proportion of which are primary. It deals with the largest number of Level I trauma cases annually in Chicago. The affiliated rotations address the narrower but indispensable needs of the resident's training. This varied population of patients offers trainees the full spectrum of a surgical clinical experience.

All residents with each surgical service make patient rounds as a group at least once a day. Informal rounds with attending surgeons are made daily, formal rounds at different intervals. Conferences are held throughout the institution; many have a surgical orientation and some are conducted by the department. The conferences include surgical grand rounds, patient management conferences, the surgical





reading program, morbidity and mortality conferences, journal reviews, surgical pathology conferences, surgical specialty lectures, tumor conferences, breast conferences, lymphoma conferences, cardiovascular conferences, gastrointestinal conferences, and a number of others.

In summary, this broadly based program challenges residents with a large number of patients with the full spectrum of surgical illnesses. Training is offered in a number of desirable settings, in a manner that permits graduated responsibility. It is a strong, academically based general surgery program.

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### **Section of Colon**

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#### **and Rectal Surgery**

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***Theodore J. Saclarides, M.D.,  
Director***

This newest section in the department is dedicated to teaching the basic principles and practices of treating disease of the large bowel and anus. It is also in the forefront of laparoscopic colon resection and the new practice of transanal endoscopic microsurgery.

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### **Section of Dentistry**

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***Leon R. Kelleher, D.D.S., Director***

The Section of Dentistry is a clinically oriented service whose major academic effort is its general practice residency program. The dental service is fully accredited by the Council on Hospital and Institution Dental Services of the American Dental Association. The general practice residency training program is fully accredited by the Council on Dental Education.

The dental service is built around a nucleus of hospital-trained general practitioners and includes representatives of several specialties. The major portion of the clinical experience is in private outpatient treat-

ment, with emphasis on management of the medically compromised patient.

The training program is flexible to the needs and interests of the trainee. It includes a concentrated three-month rotation in pain control, anesthesiology, and intravenous sedation. The program emphasizes the medical aspects of dental practice and opportunities to participate in treating the handicapped, the aged, and the acute or chronically ill. Each resident receives extensive experience in all aspects of oral surgery that might be encountered by a well-trained general practitioner.

Direct inquiries concerning the program to Norman Wool, M.D., Coordinator, Resident Clinical Activities.

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### **Section of Pediatric Surgery**

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***Angel Bassuck, M.D., Head***

The focus of the Section of Pediatric Surgery is the delivery of optimal care to infants, children, and adolescents who have critical problems consistent with the tertiary care commitment of the hospital. House officers are responsible for the pediatric surgical patients during their assignment to the General Surgery Service III. Ward rounds are held regularly. Training is also provided at Christ Hospital and Medical Center.

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### **Section of**

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#### **Transplantation Surgery**

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***James W. Williams, M.D.,  
Director***

The transplantation program is the busiest in Chicago. The expert staff is involved in renal and liver transplantation, intestinal transplantation, and soon-to-be-started pancreas transplantation. Extensive basic and far-reaching research is conducted in the surgical laboratories, involving fellows and associated scientists.



**Department of  
Immunology/  
Microbiology**

**Program in Allergy  
and Clinical  
Immunology**

**Henry Gewurz, M.D., The  
Thomas J. Coogan, Sr., M.D.,  
Professor of Immunology and  
Chairman**

*Howard J. Zeitz, M.D., Director*

The Department of Immunology/Microbiology, together with the Max Samter Institute of Allergy and Clinical Immunology at Grant Hospital of Chicago, offers a two-year residency in allergy and clinical immunology (with an optional third year) to prepare physicians to assume a leadership role in the field of allergy and clinical immunology. Upon successful completion of the program, trainees are prepared to take the examination of the American Board of Allergy and Immunology, a conjoint board of the American Board of Internal Medicine and the American Board of Pediatrics. Seven full-time and eight part-time faculty members participate in the program.

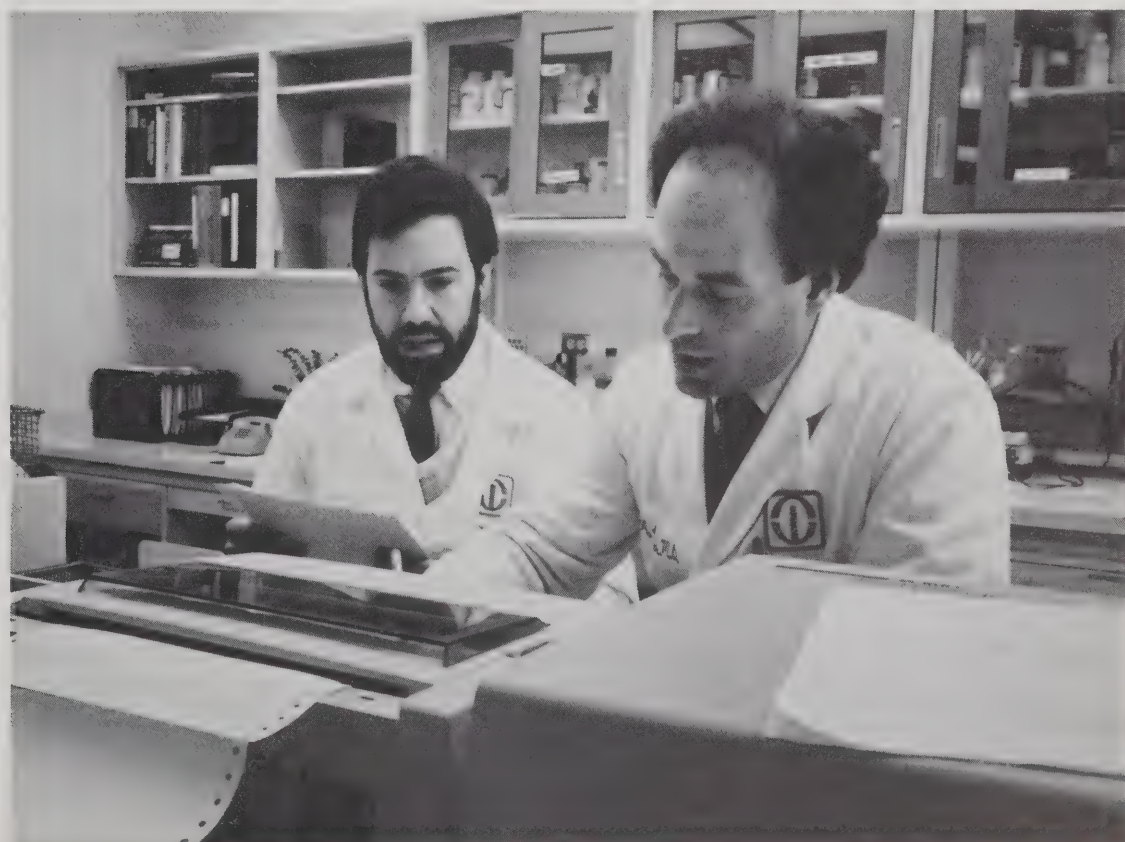
The residency program provides balanced, intensive, and diverse training in all aspects of allergy and clinical immunology. Teaching clinics are conducted in the Professional Building on the main campus and at the Max

Samter Institute of Allergy and Clinical Immunology. Approximately 1,000 new outpatients and 150 new inpatients are seen yearly. There are more than 10,000 outpatient visits every year.

The clinical service cares for inpatients and outpatients with the classic allergic diseases of urticaria, rhinitis, asthma, and pulmonary hypersensitivity, as well as patients suffering from immunodeficiency diseases and systemic hypersensitivity diseases, including vasculitis and systemic lupus erythematosus.

Under the direct supervision of an attending physician, trainees are responsible for the care of patients. Trainees learn routine and specialized diagnostic procedures, including skin testing, pulmonary function testing, bronchoprovocation testing, and challenge testing. Trainees also receive instruction regarding a wide variety of clinical immunology laboratory techniques.

The formal didactic program includes hospital teaching rounds, patient care conferences, and basic and clinical immunology conferences scheduled on a regular basis through-



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## Department of Internal Medicine

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out the week. Lectures on specialized topics cover a wide variety of subjects in pulmonary medicine, infectious disease, rheumatology, oncology, dermatology, nephrology, and hematology. Trainees attend a variety of conferences, seminars, and formal courses sponsored by the department. Trainees also take an active role in the education of rotating residents and medical students.

All trainees participate in the basic and/or clinical research programs of the department. Research is conducted under the direct supervision of one of the members of the department. Areas of current interest include: the immunobiology of the inflammatory response, the biology of the complement system, the patho-

genesis of allergic disease in general and food allergy in particular, mechanisms underlying mediator release from basophils and mast cells, the role of gammaglobulin in host defense against infection, the etiology and pathogenesis of Samter's syndrome (nasal polyps, bronchial asthma, and adverse reactions to aspirin and other nonsteroidal anti-inflammatory drugs), and the development of new treatments for allergic diseases.

Trainees must have completed an approved residency in internal medicine or pediatrics prior to starting the training program in allergy and clinical immunology. Please direct inquiries to Howard J. Zeitz, M.D., Department of Immunology/Microbiology.

***Stuart Levin, M.D., The James R. Lowenstine Professor of Internal Medicine and Chairman (Acting)***

*Alan A. Harris, M.D., Professor of Medicine, Assistant Chairman, and Program Director*

The Department of Internal Medicine provides a three-year postdoctoral residency training program, accredited by the American Board of Internal Medicine. The department is responsible for 300 of nearly 1,000 beds in the Medical Center.

Forty-eight first-year positions (38 categorical and 10 preliminary) are offered annually through the National Residency Matching Program. An additional year as chief resident, which consists of advanced training with teaching and administrative responsibility and a medical staff appointment, is offered to five of our third-year internal medicine residents.

Our department's several-decades-old tradition dictates that only the house officers who are primarily responsible for an individual patient may write orders. Attending staff do not write orders. This simple tradition guarantees both the autonomy and authority of our house officers and maintains the quality of our program at

the highest levels of professional intensity and development.

Each year is divided into four 13-week blocks. The first-year resident has 11 floor rotations through the general medical floors, the critical care units, and the oncology unit. One or two of these rotations is at the Rush North Shore Medical Center, our community hospital in Skokie, Ill. Residents also have four weeks of elective time, three weeks of vacation, and one week of educational leave. The elective month may be taken in any medical specialty or in surgery, pediatrics, psychiatry, or neurology. General medical units are staffed by two second- or third-year residents, four first-year residents, and three Rush Medical College students.

During the second year, a resident spends six months supervising general medical units and has two rotations in the emergency room/triage area. The remainder of the year is spent on elective services. The third-year resident has one to three general medical unit rotations, and spends the remainder of the year in subspecialty areas of his or her choice. Throughout the second and third year of training, each medical house officer has a half day a week of outpatient continuing medical practice. This opportunity to





provide long-term care uses the facilities of either Rush-Anchor (our HMO) or the Department of Medicine clinics. Both facilities are located on campus. Each subspecialty rotation also has an outpatient component. A PGY-1 may participate in outpatient activities on a voluntary basis. Rush-Anchor also offers a one-month block outpatient experience. House officers may also elect to obtain four to eight weeks of general internal medicine outpatient block time experience at one of two affiliated institutions with approved programs in internal medicine.

With the acquisition of the Rush North Shore Medical Center by Rush-Presbyterian-St. Luke's Medical Center, the department has expanded its training program to include inpatient experience in the community hospital setting. Rush North Shore is a 300-bed facility with two 40-bed internal medicine units staffed by four senior

and eight first-year residents. During a three-year residency, a total of two to three months will be spent at this facility. Preliminary year applicants may elect to spend more time during their single year in our program. The Rush North Shore Hospital provides residents with an outstanding experience in a community hospital and an optimal combination of patients, faculty, facility, and support services.

The educational experiences of the Department of Internal Medicine are scheduled regularly. From Monday through Thursday, teaching rounds are made by the attending physician, followed by a resident report. Conferences are held daily from noon to 1:00 p.m. Medical grand rounds occur on Friday. The noon to 1:00 p.m. conferences are either didactic presentations of specific subjects, morbidity and mortality conferences, clinical pathologic conferences, or research seminars. Each subspecialty of the

department conducts its own weekly conference that is open to all department staff. In addition, special seminars, lectures, and clinical conferences are conducted by staff and visiting professors of medicine throughout the year.

A vigorous educational program is provided in the departmental ambulatory care facilities. Residents rotate through our emergency services for two months. Our department has primary responsibility for the adult emergency room. The rotation is unique and diversified in that our residents are the first to evaluate and make decisions on patients presenting for all types of emergency care. Besides evaluating unstable ambulatory medical patients, the resident also manages a spectrum of surgical, psychiatric, obstetrical, and gynecologic patients. The basic learning experience is that of a preceptorship with the resident performing primary care. Supervisory support comes from attending personnel who are present during all clinic sessions and 24 hours a day in the emergency room. Consultation and assistance from non-medical services, when necessary, is promptly available from in-house personnel.

Individualizing programs is encouraged. Other postgraduate experiences are available, including elective rotations through ear, nose and throat (ENT), office gynecology, ophthalmology, and psychiatry for internists. Subspecialty experiences beyond the residency are available in the clinical and research fellowships offered by the various sections of the department. Research time can be scheduled during the residency. Experiences in other parts of the country or world can be arranged with approval.

In accordance with Section 709 of the Public Service Act, Rush-Presbyterian-St. Luke's Medical Center will, upon request from qualified applicants, offer shared-schedule residency programs in internal medicine. These programs will be designed by the department in consultation with candidates making the request.

All inquiries regarding the program should be directed to the program director.

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## Section of Cardiology

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***Joseph E. Parrillo, M.D., The  
James B. Herrick Professor of  
Heart Research and Director***

The Section of Cardiology provides extensive consultation and diagnostic services, participates in medical student education in both the basic and clinical sciences, and conducts research studies involving clinical cardiology, experimental biochemistry and physiology, and computer applications.

Residents in the Department of Internal Medicine rotate through this section. Training emphasizes improving the resident's physical diagnostic abilities in clinical cardiology, and the acquisition of skills in interpretation of invasive and noninvasive studies. Particular emphasis is placed on evaluating complex cardiac patients with the use of electrocardiographic, echocardiographic, and catheterization data.

The cardiology fellowship is a three-year program. Eligibility requires completion of three years of residency training in internal medicine. Training includes inpatient and outpatient cardiovascular consultation; cardiac catheterization and coronary arteriography; electrophysiology, including intracardiac and epicardial mapping; exercise electrocardiography; and cardiac graphics, including M-mode, 2D and Doppler echocardiography; and phonocardiography. Fellows also gain experience in pacemaker insertions and technology; nuclear cardiology, including thallium and gated blood pool scanning; rehabilitative coronary care; and computer techniques in cardiology and preventive cardiology. The second and third years allow concentration in research and advanced instruction in a specific field of cardiology.

Inquiries regarding the fellowship program should be addressed to the section director.



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**Section of**

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**Critical Care Medicine**

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***Joseph E. Parrillo, M.D., The  
James B. Herrick Professor  
of Heart Research and  
Director***

The Section of Critical Care Medicine was formed in 1989 in recognition of the increasing importance of critical care medicine and the multidisciplinary nature of managing critically ill patients. This section is responsible for the administration of all the intensive care units (ICUs) within the Department of Medicine. These ICUs have a total of approximately 60 beds and consist of a coronary care unit, a coronary step-down unit, a medical intensive care unit, and a respiratory step-down unit. The section conducts the educational training program for internal medicine residents rotating through these ICUs. Members of the section are also responsible for supervising critical care procedures, including placement of arterial and pulmonary artery catheters and mechanical ventilation.

The critical care fellowship consists of two basic pathways: (1) a pure critical care medicine program in which board-eligible medical residents choose to train solely in critical care (these fellows spend 12 full months in clinical critical care and an additional 12 to 24 months performing clinical investigation and participating in critical care-related rotations), and (2) a combined program of a medical subspecialty (usually cardiology or pulmonary medicine) and critical care medicine. This combined program requires 12 full months of clinical critical care medicine in addition to the requirements for the other medical subspecialty. Both pathways provide extensive experience in management of critically ill patients in all the Department of Medicine ICUs, consultative experience regarding management of surgical ICU patients, and experience performing ICU procedures. Fellows also actively participate in a critical

care education program and learn about administrative and ethical concerns for critically ill patients. The fellowship contains a major emphasis on performing critical care-related research.

Inquiries regarding this fellowship should be directed to the section director.

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**Section of**

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**Digestive Diseases**

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***Seymour Sabesin, M.D.,  
The Josephine Dyrenforth  
Professor of Gastroenterology  
and Director***

The Section of Digestive Diseases provides a full range of consultative, diagnostic, and therapeutic services in gastrointestinal and liver disease. The section is divided into a gastrointestinal unit and a liver unit. Both units are engaged in clinical research using investigational drugs, and several other studies. The units perform a full spectrum of diagnostic and therapeutic endoscopic procedures, intestinal motility testing, and liver biopsy. The liver unit is actively involved in liver transplantation.

Residents and students spend one month in the section, splitting their time between the gastrointestinal and liver units. They participate in consultations and observe endoscopic procedures. Formal teaching sessions include biweekly didactic sessions that require advanced reading, a weekly clinical conference held jointly with Cook County Hospital, a monthly hepatobiliary conference held jointly with Northwestern Medical Center, and a monthly gastrointestinal malignancy conference.

The fellowship program is for two to three years. It encourages active participation in clinical research and in developing clinical and endoscopic skills. The section has ties with Rush North Shore and MacNeal Hospital, allowing fellows to participate in these programs.

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**Section of**

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**Emergency Medicine**

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***Paul K. Hanashiro, M.D.,  
Director***

The Section of Emergency Medicine provides emergent and acute ambulatory care for all adult patients who are seen in the emergency department of the Medical Center. The emergency department is a comprehensive emergency facility staffed by nine full-time attendings, including the director and the associate medical director, who is also the medical director of the Rush Poison Control Center.

Residents in internal medicine have two or three mandatory rotations during their second and third years. The internal medicine house staff provides primary coverage. However, in-house consultants are available from other specialties 24 hours a day. All patients are seen by a resident and an attending physician, with the attending playing a supervisory role. This approach provides a unique experience for medical residents since a broad spectrum of adult problems are managed on first encounter. The basic learning experience is that of a preceptorship. Additional didactic sessions are also scheduled throughout the year.

In conjunction with the Rush Poison Control Center, the Section of Emergency Medicine also focuses on toxicologic emergencies in many of its research activities. A number of other research activities have been initiated in the emergency department in conjunction with other sections of the Department of Medicine, especially the areas of infectious diseases and cardiology. Currently there are no fellowship programs in this section.

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**Section of**

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**Endocrinology and Metabolism**

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***Theodore Mazzone, M.D.,  
Director***

The Section of Endocrinology and Metabolism emphasizes a broad physiological approach to the spectrum of clinical problems seen in outpatient and hospital consultation by our attending staff and residents. The clinical program and fellowship are fully integrated with the Division of Endocrinology at Cook County Hospital, where the director, Dr. C.R. Kannan, heads a highly skilled team of physicians and educators who contribute significantly to the Rush program. Endocrine rounds are held weekly with the staffs of Rush and Cook County Hospital.

The research programs of the section are funded primarily by grants from the National Heart, Lung and Blood Institute. The range of projects under study includes macrophage biology, growth factor regulation of gene expression, cellular lipoprotein metabolism, and control of lipoprotein composition.

Other projects include assessment of new therapies for osteoporosis and Paget's disease conducted by Dr. Will Ryan, a world authority on these disorders.

The teaching program is active at all levels. The section offers students, residents, and fellows supervised experience with both outpatients and inpatients. In addition to regularly scheduled conferences, the section jointly, with Cook County Hospital, selects two fellows who serve for two years as part of a fully integrated fellowship program. All fellows are required to design and execute a research project that may be either primarily clinical or laboratory in nature.

Individuals may apply for approved fellowships after three years of residency training, or by special arrangement.



Fellows should be eligible to take the examination for certification by the American Board of Internal Medicine. Please direct inquiries to the section director.

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## Section of

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### General Internal Medicine

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***C. Anderson Hedberg, M.D.,  
Director***

The Section of General Internal Medicine is the newest and largest section of the Department of Medicine. More than 70 general internists practice primary care for adults at the Medical Center and in a variety of locations throughout the city and suburbs. They are private practice, salaried physicians and members of Rush managed care programs. They are responsible for more than 50 percent of the Department of Medicine's admissions and participate actively in all of the important teaching programs of the department.

The goals of this section are to articulate the special context and requirements of primary care, encourage the development of role models for students and residents, expand the educational base to provide excellent teaching in ambulatory inpatient general medicine, assist new physicians in establishing practices in a variety of settings, and initiate research projects pertinent to the discipline.

Central to the program development of the section is the realization that training in ambulatory medicine is a national priority, and that there is a nationwide shortage of well-trained primary care doctors. The program emphasizes areas of particular expertise for the general internist, such as quality assurance, cost-consciousness, managed care, public policy, access to care, women's health, health promotion, disease detection and prevention, clinical decision-making, moral and ethical issues, community-based services, behavioral medicine, occupational and environmental

medicine, informatics, and practice management.

The section is being organized on the foundation of the strong tradition of clinical excellence in general internal medicine at Rush-Presbyterian-St. Luke's Medical Center, and it provides exciting prospects for the future.

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## Section of

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### Geriatric Medicine

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***Thomas J. Schnitzer, M.D.,  
Ph.D., The Willard L. Wood,  
M.D., Professor of Medicine;  
Medical Director,  
Johnston R. Bowman Health  
Center for the Elderly; and  
Director***

The Section of Geriatric Medicine, through a substantial clinical base on and off campus, provides trainees with exposure to a diverse population of the elderly and to clinical experiences in many types of settings along the continuum of care. Research activities are directed to areas of expertise of the individual faculty and include epidemiology, health care delivery issues, impaired physical function, osteoarthritis, urinary incontinence, pressure sores, and dementia.

The inpatient geriatric medicine unit in the Johnston R. Bowman Health Center for the Elderly is structured to give residents an opportunity to work with a multidisciplinary team in the assessment and management of the noninstitutionalized elderly. Case conferences and a regular lecture series during the rotation highlight age-related and age-dependent conditions in the elderly population.

During the four-week elective in geriatric medicine, the house officer or senior medical resident sees patients in a variety of on- and off-campus sites; selected geriatric syndromes and instruments of functional assessment are stressed.

Outpatients are seen as part of the faculty office practice or are referred for a comprehensive functional assessment performed by our interdis-

disciplinary team. The inpatient service includes consultations on geriatric rehabilitation, geropsychiatry, and acute care units in Presbyterian-St. Luke's Hospital and the Bowman Center. Off-campus sites include a life care community in LaGrange, Ill., and a variety of nursing homes.

The fellowship—two years with a possible third year—leads to eligibility for certification in geriatric medicine by the American Board of Internal Medicine.

Inquiries regarding fellowships or rotations by students or residents should be directed to the program director.

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### Section of Hematology

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***William H. Knospe, M.D., The  
Elodia Kehm Professor of  
Hematology and Director***

The Section of Hematology provides consultative services for patients with hematologic malignancies, anemias, coagulation disorders, immunohematology, and nonmalignant disorders. The section provides diagnostic laboratory information and hematologic measurements for all Medical Center patients and participates in the clinical hematology laboratories, the Blood Center and the coagulation and platelet-function laboratories. The Blood Center provides full-service blood banking, including various component therapies and frozen blood. The highly automated Clinical Hematology Laboratory incorporates a dedicated interactive computer to expedite the reporting of results. In addition to all standard procedures for counting and identifying blood cells, the laboratories provide highly sophisticated diagnostic hematology and coagulation procedures.

This section offers fellows in hematology, residents in internal medicine, and senior medical students supervised clinical experience with inpatients and outpatients and opportunities to participate in diagnostic laboratory procedures. Teaching activities include daily hospital teaching

rounds and weekly sectional conferences and seminars on patient-oriented problems, clinical and basic science topics in hematology, marrow morphology, and clinical coagulation problems, and the Medical Center's weekly lymphoma and tumor conferences. Residents also participate in outpatient office practice conducted by the faculty. Residents in internal medicine and medical students are assigned for four weeks at a time. Fellowships in hematology or hematology/medical oncology are available at the end of the third year of residency training.

A program of bone marrow transplantation has been established under the direction of Herbert Kaizer, M.D., Ph.D., with Solomon S. Adler, M.D., as a member of the transplant team.

Residents are encouraged to participate in the research activities of the section. Research spans a broad range of activities, including biochemical and physiological studies at cellular and subcellular levels and clinical studies of the effect and treatment of diseases in patients.

Inquiries regarding the fellowship program should be addressed to the section director.

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### Section of

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#### Infectious Disease

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***Stuart Levin, M.D., The James  
Lowenstine Professor of  
Internal Medicine and Director***  
***Gordon Trenholme, M.D.,  
Professor of Internal Medicine  
and Acting Director***

The Section of Infectious Disease provides consultation and care for patients with hospital- and community-acquired infections. This section is also responsible for surveillance and control of outbreaks of infection within the hospital, through the activities of the hospital epidemiologist and three nurse epidemiologists. Rush is one of two AIDS treatment centers in Chicago funded by the National Institutes of Health.



Teaching activities include daily hospital teaching rounds, a lecture course on the pharmacology of antimicrobial agents, and a series of lectures in the second-year medical school curriculum on the pathophysiology of infectious disease. A three-hour research and case discussion conference is held weekly. The laboratory of the section is available for investigative activities. Current areas of research interest include: (1) clinical, pharmacologic, and efficacy studies of new antibiotics, (2) studies on the evolution of antibiotic-resistant organisms, (3) AIDS and its complications, (4) the development of rapid methods of identification of etiologic agents of infection, (5) clinical and basic studies regarding acquired immune deficiency syndrome, (6) investigation of the pathogenesis and therapy of infectious diarrheas including *Campylobacter fetus*, (7) Lyme disease entomology, epidemiology, serology, and therapy, (8) HIV virology, (9) HIV therapy, (10) HIV immunology, (11) antiviral chemotherapy for herpes, cytomegalovirus, and zoster, (12) malaria chemotherapy, (13) the therapy of *Chlamydia* infections and in vitro susceptibility studies, (14) antifungal therapy using new agents, (15) endotoxemia and gram-negative sepsis, (16) prophylaxis and therapy of *Pneumocystis carinii pneumonia*, (17) hospital epidemiology of nosocomial infections, and (18) health department collaboration for city-wide infection outbreaks.

Members of the resident staff are assigned for two-month rotations. Two- or three-year fellowships are available after the third year of residency training in medicine. Applications should be made to Gordon M. Trenholme, M.D., acting director.

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### Section of Nephrology

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**Edmund J. Lewis, M.D., Director**

Patients with various primary and systemic lesions of the kidney and genitourinary tract, or electrolyte and

metabolic problems are studied and treated by the staff of the nephrology section. The section has a special interest in the diagnosis and therapy of patients with collagen-vascular disease. The laboratories of the unit are available for many special studies, including immunologic investigations of serum and renal biopsy material. The application of plasma-exchange therapies to several diseases, especially lupus erythematosus, is under active investigation. The section also has active acute and chronic dialysis programs. Patients who require chronic intermittent dialysis or transplantation are cared for by the staff.

The section is pursuing research into several immunologic aspects of renal disease. Systemic lupus and cryoglobulinemia are of particular interest. A cell biology program is being carried out in concert with members of the Department of Pathology.

Daily clinical conferences are held with renal pathologists to review tissues from patients who have had renal biopsies. Each week, there are regular research meetings, a renal pathology conference, a renal-urologic-radiologic conference, and a nephrology conference.

Members of the resident staff are assigned to the section for one- or two-month rotations, and research fellowships are available at the end of the third year of residency training. Applications for fellowships should be made to the section director.

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### Section of

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### Medical Oncology

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**Jules E. Harris, M.D., The  
Samuel G. Taylor III, M.D.,  
Professor of Oncology and  
Director**

The educational program of the Section of Medical Oncology emphasizes the philosophy that cancer patients may live long and productive lives if properly treated. Each year, the section sees approximately 1,200 new cancer patients, who provide an



ample and varied spectrum of oncologic problems. The residents and fellows follow and study these patients under the direction of members of the section. New patients and new problems are discussed at bi-weekly meetings.

The section's program stresses the importance of a combined approach to tumor therapy using the resources of the departments of surgery, therapeutic radiology, pathology, and nuclear medicine. There are weekly breast tumor, lymphoma, and gynecologic tumor conferences. The section is also involved in many of the clinical trials sponsored by the Eastern Cooperative Oncology Group, National Surgical Adjuvant Breast Project, and the Gynecologic Oncology Group. Pilot studies involving chemotherapy and immunotherapy that emphasize the clinical study of interferon and other biological response modifiers are undertaken in association with the institution's affiliated network of hospitals.

The section has an active research program in human and experimental tumor immunobiology, and in molecular biology, emphasizing human oncogenes, signal transduction mechanisms, and mechanisms of tumor-cell differentiation. These investigations also involve animal studies concerned with the immunogenetics of tumor-graft rejection and clinical studies that examine the effect of cytotoxic drugs on immunoregulatory mechanisms in solid-tumor cancer patients. Research opportunities are available in both areas of investigation for students, residents, and fellows.

A four- to eight-week rotation stressing clinical aspects of cancer is offered to residents. One- to three-year clinical fellowships that provide in-depth training in medical oncology and rotation through related clinical fields and laboratories are offered to selected trainees. The fellow is prepared for board certification in medical oncology. Application should be made to the section director.



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**Section of**

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**Pulmonary Medicine**

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***Roger C. Bone, M.D., The Ralph C. Brown, M.D., Professor of Internal Medicine and Director***

The Section of Pulmonary Medicine provides specialized consultation service for patients with diseases of the lungs and thorax, and to the critical care unit. In addition to the clinical service, the section is responsible for the pulmonary function laboratory, chest physical therapy, and respiratory therapy. The section also performs fiberoptic bronchoscopies and other special procedures.

The fellowship generally lasts three years and offers extensive participation in all activities listed. Fellows manage an outpatient clinic once a week. Supplementary rotations through intensive care, allergy, infectious disease, and chest surgery round out the resident's experience. Much of the teaching is done on a personal basis. The section conducts three conferences a week. Research experiences are broad but focused around intensive care medicine, both clinical and basic.

The fellowship prepares candidates for the specialty board of pulmonary medicine and critical care. Prerequisites for the fellowship are three years in the approved residency program in internal medicine or the equivalent, and board eligibility in internal medicine.

Inquiries should be directed to Peter Szidon, M.D.

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**Section of Rheumatology**

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***Thomas J. Schnitzer, M.D., Ph.D., The Willard L. Wood, M.D., Professor of Rheumatology and Director***

The Section of Rheumatology provides primary clinical, consultative, and procedural services in the diagnosis and management of rheumatic diseases and complaints. The section is actively engaged in clinical and basic science research and participates in the medical education process at the basic science and clinical levels.

Students and residents rotate through the section in one-month elective rotations. Under the supervision of fellows and attending staff, the trainees evaluate patients in both an inpatient and outpatient office setting. They learn the procedures and diagnostic and management skills necessary to correctly identify and care for patients with problems of a rheumatic nature. During the month-long rotation, trainees are typically exposed to most of the common and many of the uncommon rheumatic diseases and problems. Teaching is done both at the bedside and in formal weekly conferences. A weekly clinical conference is held in conjunction with the rheumatology sections of Cook County and the University of Illinois hospitals. In addition, an x-ray conference, a journal club, and a research conference with invited guest speakers are held by the section on a triweekly rotating schedule.

Fellowships of two years, with a possible third year, lead to eligibility for certification by the American Board of Internal Medicine in the subspecialty of rheumatology.

Inquiries regarding fellowships and rotations by students and residents should be addressed to the program director.

## Department of Neurological Sciences

**Jacob H. Fox, M.D., *The Jean Schwappe Armour Professor of Neurology and Chairman***  
**Harold L. Klawans, M.D., *The United Parkinson Foundation Professor in Neurological Sciences, and Judd M. Jensen, M.D., Residency Co-Directors***

The Department of Neurological Sciences is one of the oldest academic departments in the institution and has a long history of excellence in both teaching and research. The institution's first endowed professorship was established in the Department of Neurological Sciences in 1962. The department is divided into sections for cerebrovascular disease, epilepsy, general neurology, neurobiology, neuromuscular diseases, and Parkinson's disease and related movement disorders. Each section has its own faculty responsible for clinical care, teaching, clinical research, and basic science investigation. Faculty members also lead the Rush Alzheimer's Disease Center and the Rush Multiple Sclerosis Center.

Research questions currently being pursued by faculty include: (1) the risk factors for vascular dementia, (2) the role of carotid endarterectomy in symptomatic and asymptomatic carotid occlusive disease, (3) acute ischemic stroke therapies that reduce morbidity and mortality, (4) investigation and development of new treatment strategies for movement disorders—pharmacologic, surgical, and biomedical, (5) environmental etiologic influences on the onset, expression, and progression of Parkinson's disease, (6) the interface between motoric and behavioral dysfunction in movement disorders with anatomic, pharmacologic, and physiologic probes, (7) the physiology of excitable ion channels, (8) the pathophysiology of conduction in demyelinated nerve, (9) the pharmacology of conduction modifiers in multiple sclerosis, (10) the biologic substrate of Alzheimer's disease with experiments involving human tissue and animal models, (11) growth factors and their relationship to neurodegenerative diseases, (12) risk

factors for the development and progression of Alzheimer's disease, (13) interventions that may improve symptoms in patients with Alzheimer's disease, (14) the electrophysiology of aging, (15) new therapeutic approaches to the medical and surgical treatment of epilepsy, (16) anatomic correlates of partial seizures and dementia, (17) motor control evaluation using computer-assisted electromyogram, (18) pharmacologic treatment of amyotrophic lateral sclerosis, and (19) immunosuppressive therapy in myasthenia gravis.

The research program thus extends from studies of molecular and electrical phenomena of the nervous system and subcellular structures of nerve cells to the function of the healthy and diseased brain, with a major emphasis on clinical neuropharmacology.

The Department of Neurological Sciences offers a three-year residency in neurology. The residency program is accredited by the Liaison Committee of the American Medical Association and the American Board of Psychiatry and Neurology. Four residents are accepted each year into the program. One year in a postgraduate program in general internal medicine is a prerequisite.

The goal of the program is to produce well-rounded clinical neurologists with a strong background in and understanding of basic neurobiological sciences. The first year of the neurology residency consists of 12 months of clinical neurology spent on inpatient and consultation services. Currently, eight months are spent at Rush-Presbyterian-St. Luke's Medical Center and four months are spent at Christ Hospital and Medical Center.

The second year consists of rotations in electroencephalography, electromyography, neuroradiology, pediatric neurology, neuropathology, and clinical neurology. During the third year, the resident spends six months acting as senior resident and six months in elective rotations. Elective rotations during the third year are chosen after consultation between the resident and the program director.

All patients admitted to the neurologic service are available for



teaching and clinical experience. These patients suffer from a broad range of neurologic problems, including movement disorders, multiple sclerosis, epilepsy, and neurodegenerative and cerebrovascular disease. Active teaching clinics, also conducted in the private outpatient offices of faculty of the Department of Neurological Sciences, include specialized clinics in epilepsy, muscular dystrophy, multiple sclerosis, dementias, and movement disorders. Throughout the three-year program, residents have primary care responsibility for outpatients in the neurology clinic.

A major strength of this program is the close contact between the faculty and the small number of selected residents. Teaching rounds are made six days a week on each of the two clinical services. Weekly teaching ses-

sions include chairman's rounds, brain cutting, neuroradiology, neurology grand rounds, neurology basic science conferences (for residents only), and research meetings. In addition, residents have significant teaching responsibilities, including both clinical teaching and assisting in the neuroanatomy laboratory. Extensive clinical and preclinical research is carried out in a wide variety of areas by department members. Residents are urged to participate in these programs at some time in their training. Residents have close interaction with Ph.D. neuroscientists and other members of the department.

Fellowships are offered in electromyogram, electroencephalogram, and movement disorders/neuropharmacology. Inquiries should be directed to the program director.

***Walter W. Whisler, M.D., Ph.D.,  
Chairman***

The Department of Neurological Surgery offers one position annually in a six-year, post-M.D. training program approved by the American Board of Neurological Surgery. The clinical aspects of the program are organized around the principle of progressive, graded responsibility with appropriate supervision.

During the first year, residents rotate through general surgery and other surgical departments to develop a broad knowledge of the surgical arts and sciences. The second year is spent in clinical neurosurgery, with emphasis on diagnostic neuroradiology. In the third year, there is one six-month rotation in neurology and another in neuropathology. The fourth year is set aside for research. The last two years are devoted to clinical neurosurgery. Rotations often can be modified to accommodate special interests.

Training is centered at Presbyterian-St. Luke's Hospital where approximately 620 neurosurgical procedures are performed per year.

The program is designed to present the basic neurological sciences as well as the practical aspects of neurosurgery. During the year, residents will attend neurology and neurosurgery grand rounds, brain-cutting seminars, and a neurosurgical topic seminar. During the first part of neurosurgical training, the resident attends the Cook County Postgraduate Neuroscience Course. Primary among the strengths of the Department of Neurological Surgery is the broad variety of clinical problems that are studied and managed. Besides general cranial, spinal, pediatric, and epilepsy neurosurgery, many microsurgical and stereotaxic procedures are performed.

Research facilities within the Department of Neurological Surgery include laboratories for neurochemistry, neurophysiology, and tissue culture. Two full-time Ph.D.s are actively engaged in research. Some of the projects are carried out with the cooperation of other departments and other institutions, including investigations into motor physiology, spasticity, the immunology of brain tumors, implantable

## Department of Obstetrics and Gynecology

drug pumps, and neurotransplantation. Thus, a broad range of clinical and experimental projects is carried out within the department, and resi-

dents have an opportunity to participate in these activities during training.

Inquiries concerning the program should be directed to the chairman.

***George D. Wilbanks, M.D., The  
John M. Simpson Professor of  
Obstetrics and Gynecology  
and Chairman***

*Donna S. Kirz, M.D., Director,  
Rush-Christ OB-GYN Integrated  
Residency Program*

*Edward H. Axelrod, M.D.,  
Chairman, Christ Hospital and  
Medical Center*

*Barry Wolk, M.D., Director,  
Residency Program, Christ  
Hospital and Medical Center*

The Department of Obstetrics and Gynecology offers a four-year post-medical school training program approved by the American Board of Obstetrics and Gynecology. The residency emphasizes comprehensive experience in all phases of obstetrics and gynecology, as well as experience in internal medicine, neonatology, anesthesiology, and obstetric and gynecologic pathology. The physician is prepared for the practice of general obstetrics and gynecology, for further subspecialty training, or for a career in academic obstetrics and gynecology.

This integrated residency program combines the departments of obstetrics and gynecology of both Presbyterian-St. Luke's and Christ hospitals to provide a total, well-balanced experience. Elective time may be spent in clinical rotations or basic research programs in the Department of Obstetrics and Gynecology or in related specialties depending on the interest of the individual resident. There are seven positions at each level of a four-year program for a total of 28 residents. Fellowships are available in maternal/fetal medicine, reproductive endocrinology and infertility, and urogynecology.

All members of the attending staff are certified by the American Board of Obstetrics and Gynecology. They are

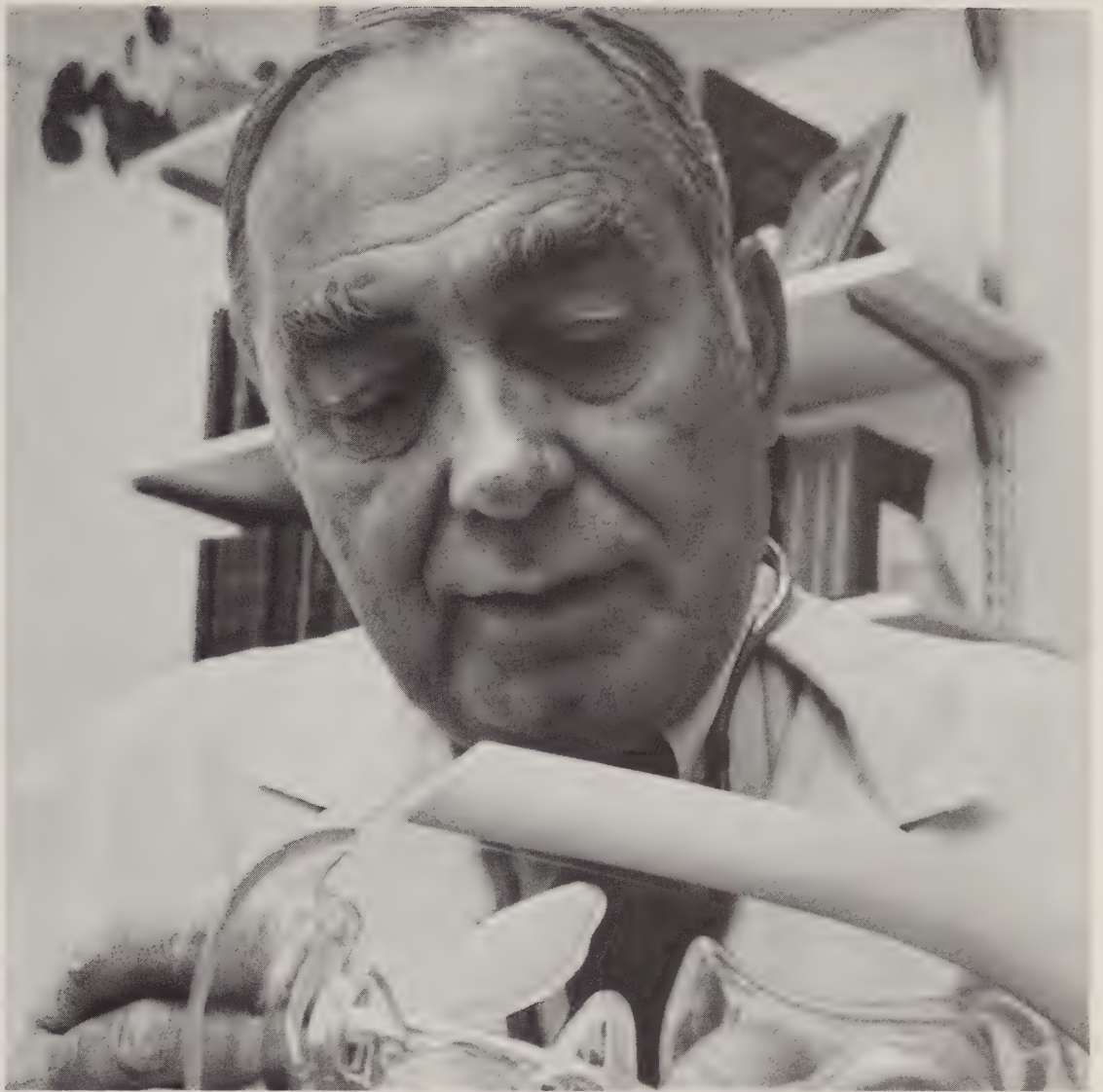
actively engaged in teaching programs for house staff and medical students. Residents at all levels are involved in student teaching at Rush Medical College.

During the first year, residents spend eight months in obstetrics and gynecology, learning basic patient-management skills and simple operative techniques. There are additional off-service rotations through general medicine, neonatal intensive care, and radiology. In the second year, residents assume more responsibility in each rotation, as well as in the subspecialty divisions of gynecology and endocrine infertility. In the third year, residents begin to manage patients with more complicated problems, conduct preoperative workups, handle obstetrical problems, and assume more operative responsibility. There is a formal rotation in high-risk obstetrics and gynecology. Another rotation allows time for research as well as elective time. During the fourth year, the resident serves as chief of the respective services in obstetrics and gynecology, both at Rush Medical Center and at Christ Hospital and Medical Center. In addition, the senior resident staffs the adolescent family center clinic and trains in urogynecology, genetics, colposcopy, and adolescent gynecology. The program also has a continuity clinic in the third and fourth years for gynecology patients.

Each resident is required to complete at least one research project of his or her choice with a faculty advisor during the four years, which will be presented at a resident seminar held each spring. Many projects result in published papers and presentations at national and international meetings.

All services are available for teaching and clinical experience; this gives residents experience in a broad range of disciplines, including all subspecialties listed below. Active teaching





clinics are conducted in the outpatient offices located in the Professional Building and at Christ Hospital and Medical Center. The services perform a total of 7,500 deliveries and 5,000 operative procedures annually, and emphasize tertiary care for high-risk obstetrics, oncology, endocrinology, and complicated gynecologic operative procedures.

The department has staff representation in the major obstetric and gynecologic subspecialties: perinatal biology, endocrinology and infertility (including in vitro fertilization), oncology, community obstetrics, family planning, obstetric anesthesia, sexual dysfunction, and psychosomatic obstetrics and gynecology. Each subspecialty involves interdisciplinary associations to broaden patient care, teaching, and research objectives. There is a maximum degree of interdepartmental exchange and cooper-

ation. Faculty with diverse backgrounds and a common interest in clinical obstetrics and gynecology offer residents depth in basic training and opportunity for specialized consultation and learning.

Applications for this residency program should be made to Donna Kirz, M.D., Director, Integrated Residency Program.

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### **Section of Ambulatory**

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### **Reproductive Health Care**

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***Dee E. Fenner, M.D., Director***

The Section of Ambulatory Reproductive Health Care offers a wide range of experience in the ambulatory care of the obstetric and gynecologic patient. These experiences include

routine health maintenance, prenatal care, cancer detection, venereal disease detection and treatment, family planning, and detection and treatment of gynecologic disease.

In an ambulatory setting, residents have the opportunity to follow the obstetric patient during both the prenatal and postpartum period. For those gynecologic patients who require surgery, residents follow the patient preoperatively and postoperatively at the Adolescent Family Center, the Gynecology Group, and the private offices of Women's Health Consultants.

In addition, residents interact with patients at the ambulatory unit of Christ Hospital and Medical Center and in four private practices at Rush North Shore.

The section emphasizes preventive medicine and patient education. A resident may elect, with the consent of the director, to engage in programs to develop particular skills in such areas as colposcopy or urodynamics.

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## Section of

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### General Gynecology

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***Dee E. Fenner, M.D., Director***

This section stresses the need for theoretical and practical instruction in the surgical aspects of gynecology, both abdominal and vaginal. Following the influence of Drs. Heney, Allen, and Boysen, this section emphasizes vaginal surgery. Members of the section have an interest in urological problems associated with pelvic relaxation and a strong interest in infections in obstetrics and gynecology, and they conduct ongoing clinical research programs in these areas.

Residents rotate through the general gynecology service each year, a program that provides increasing responsibility for preoperative evaluation through surgery and postoperative care. Residents actively participate in all surgical procedures. Senior residents, who have adjunct attending privileges, take a major role

in all surgical procedures in which they participate. The gynecologic attending staff has overall responsibility for all procedures performed by residents. Residents also are involved in the urogynecology/urodynamic laboratory.

Formal teaching activities of this section include grand rounds, patient bedside rounds, and a daily patient management conference. Each spring, a visiting professor is invited to participate in a seminar titled "Aspects of Gynecologic Surgery."

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## Section of

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### Gynecologic Oncology

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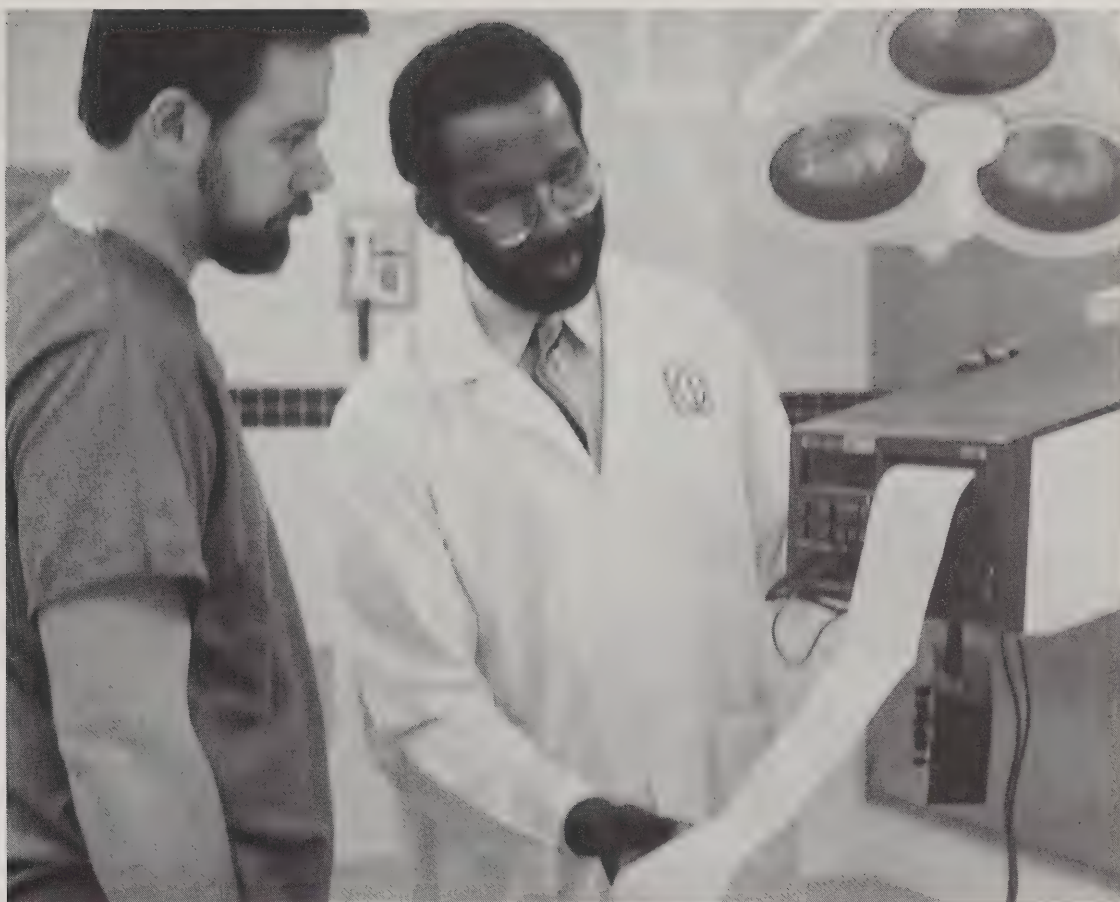
***Edgardo L. Yordan, M.D.,  
Director***

The Section of Gynecologic Oncology consists of four staff gynecologic oncologists and four nurse oncologists. The section provides a focus for multidisciplinary long-term care of women with gynecologic malignancies. Activities of the section include the prevention, diagnosis, management and follow-up care of these patients, integrating the multidisciplinary efforts of the sections of gynecologic oncology, radiation oncology, medical oncology, gynecologic pathology, nursing oncology, clinical psychology, clinical nutrition, social services, and pastoral care.

Residents are offered supervised graduated experience in the diagnosis and management of gynecologic cancer, including gynecologic surgery, gynecologic endoscopy, chemotherapy, and radiation therapy. Approximately 200 new patients are seen each year.

Residents rotate in the second, third, and fourth years while at Rush-Presbyterian-St. Luke's Medical Center; they rotate in the third and fourth years while at Christ Hospital and Medical Center. Residents at Rush North Shore Medical Center participate in all cases conducted at that institution. Residents participate in all operations and attend all outpatient





sessions, including colposcopy examinations. Didactic activities include daily teaching rounds, a weekly multidisciplinary clinic teaching conference, a formal gynecologic tumor board, a monthly oncology journal club, a monthly oncology research conference, and periodic participation in general grand rounds.

Several clinical research projects are in progress within the section, in cooperation with the nationwide Gynecologic Oncology Group. Each resident is involved in basic cancer-patient care and may elect to pursue a clinical or basic project during the training period.

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### Section of

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### Maternal-Fetal Medicine

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**Howard T. Strassner, M.D.,  
Director**

**Donna Kirz, M.D., Associate  
Director**

The Section of Maternal-Fetal Medicine focuses on care of the high-risk

mother and fetus, both at Rush-Presbyterian-St. Luke's Medical Center and within the Rush perinatal network. Education of physicians in training and in practice is a vital part of this responsibility.

The section is charged with providing obstetric education to students, residents, and fellows at Rush. We offer residents and fellows supervised experience with both inpatients and outpatients. Nearly 40 percent of our deliveries are high-risk, for a total of more than 1,000 high-risk patients per year. The section handles antepartum admissions to the high-risk obstetrics service for medical, surgical, and obstetric complications of pregnancy.

The Rush Perinatal Center is the tertiary referral facility and administrative center for the 12-hospital Rush Perinatal Network. Nearly 18,000 deliveries per year are performed in the network, thereby increasing our patient and research base.

Seven of the 28 residents are assigned to various levels of responsibility in the maternal-fetal/obstetric service at Rush. There are opportunities for residents and students

from other institutions to rotate on the maternal-fetal medicine service to enhance their exposure and training in high-risk obstetrics. The maternal-fetal medicine program is approved by the American Board of Obstetrics and Gynecology for postresidency fellowship training in the subspecialty of maternal-fetal medicine. Residents and fellows are responsible for high-risk patients seen at and admitted to Rush-Presbyterian-St. Luke's Medical Center.

Teaching consists of formal daily rounds, patient conferences, lectures, and seminars. Involvement in the basic and clinical research of the section is encouraged. Rotations are also available in other departments and at network hospitals. As prerequisites to acceptance into the fellowship training program, applicants must be eligible for certification by the American Board of Obstetrics and Gynecology and licensed in the State of Illinois. Please direct inquiries to Howard T. Strassner, M.D., Director, Section of Maternal-Fetal Medicine.

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## **Section of Obstetrics and**

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### **Gynecology Research**

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***Lourens J.D. Zaneveld, D.V.M.,  
Ph.D., The Harry Boysen, M.D.,  
Professor of Obstetrics and  
Gynecology and Director***

The Section of Obstetrics and Gynecology Research aims at amalgamating and coordinating all research in the department and encouraging new research by faculty, residents, and students. The residents' research program is organized through this section and the Reproduction Research Laboratory is part of the section. Members of the laboratory include faculty and staff (both Ph.D.s and M.D.s), postdoctoral fellows, students, technicians, and an administrative coordinator. The laboratory performs research in the areas of fertility/infertility, reproductive toxicology, and contraceptive development.

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## **Section of Psychosomatic**

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### **Obstetrics and Gynecology**

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***Stephanie Cavanaugh, M.D.,  
Director***

Recognizing that the obstetrician-gynecologist is often the primary provider of health care to his or her patients, the Section of Psychosomatic Obstetrics and Gynecology is organized to stimulate and encourage expertise in this area. A productive liaison exists with the Department of Psychiatry. Combined appointments have produced an interdisciplinary team of clinicians and a research group. Consultation concerning patients with psychosomatic problems and unusual emotional difficulties is available to the staff at all times.

Residents have the opportunity to acquaint themselves with the effect of the emotions on reproductive and gynecologic physiology, as well as the importance of social and economic factors in physical and mental health.

The case method is used as a tool in teaching. The department is devoted to the principle of good patient care and to developing new systems for delivering this care to the community. Faculty of this section attempt to stimulate trainees to develop their own special interests by providing opportunities for enhancing their understanding of and expertise in the field.

Finally, the section conducts ongoing research examining psychological factors associated with survival from gynecologic cancer.

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## **Section of Reproductive**

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### **Endocrinology and Infertility**

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***Ewa Radwanska, M.D., Ph.D.,  
Director***

The Section of Reproductive Endocrinology and Infertility concentrates on:



(1) Providing up-to-date, comprehensive scientific evaluation and treatment of infertile couples, including assisted reproductive procedures such as in vitro fertilization, embryo transfer, gamete intrafallopian transfer, zygote intrafallopian transfer, and tubal embryo transfer.

(2) Comprehensive and scientific management of endocrine disorders in women.

(3) Teaching of reproductive endocrinology and infertility at all levels of medical education for medical students, residents, and subspecialty fellows.

(4) Conducting clinical and basic reproductive research.

The clinical activities of the section use private practice resources (the reproductive endocrinology center) and are backed by the endocrine laboratory, andrology laboratory, in vitro fertilization laboratory, microsurgery laboratory, and surgical facilities of the Medical Center.

Teaching activities of the section consist of regularly scheduled lectures, conferences, seminars, case presentations, journal club meetings, and other didactic sessions as well as bedside teaching in the Medical Center.

One resident, at the second-year level, is assigned to the section for a seven-week rotation. The resident participates in all clinical, surgical, and didactic activities of the section and is encouraged to take part in one of the ongoing research projects. The results of such a project may be chosen for a poster display on Rush University Day. During the rotation, he or she is expected to develop a basic knowledge of reproductive disorders and surgical skills in laparoscopy and hysteroscopy, and become familiar with microsurgical techniques and assisted reproductive procedures.

The educational program of the section is approved by the American Board of Obstetrics and Gynecology for a two-year fellowship in reproductive endocrinology and infertility. Two fellows at each level of training participate in all clinical, didactic, and research activities of the section. In addition, the fellows pursue their own

research projects as a part of their advanced training in reproductive endocrinology. Research interests and activities of the section include studies of endometriosis adhesions, myomata, and the effects of various treatment regimens, particularly gonadotropin-releasing hormone (GnRH agonists), on these diseases.

Identification of an optimal method of long-term estrogen replacement, management of dysfunctional uterine bleeding, sperm for intrauterine insemination, studies of ovulatory dysfunction, induction of ovulation, hyperandrogenism, and hyperprolactinemia are some examples of ongoing clinical interest. Other projects include investigation of the effects of tubal surgery on ovarian function; hormonal, dynamic, and enzyme studies of male infertility; computer-assisted semen analysis; development of improved methods for the cryopreservation of gametes, zygotes, and pre-embryos; and a study of factors determining oocyte maturation and influencing the success of assisted reproductive procedures.

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## Section of

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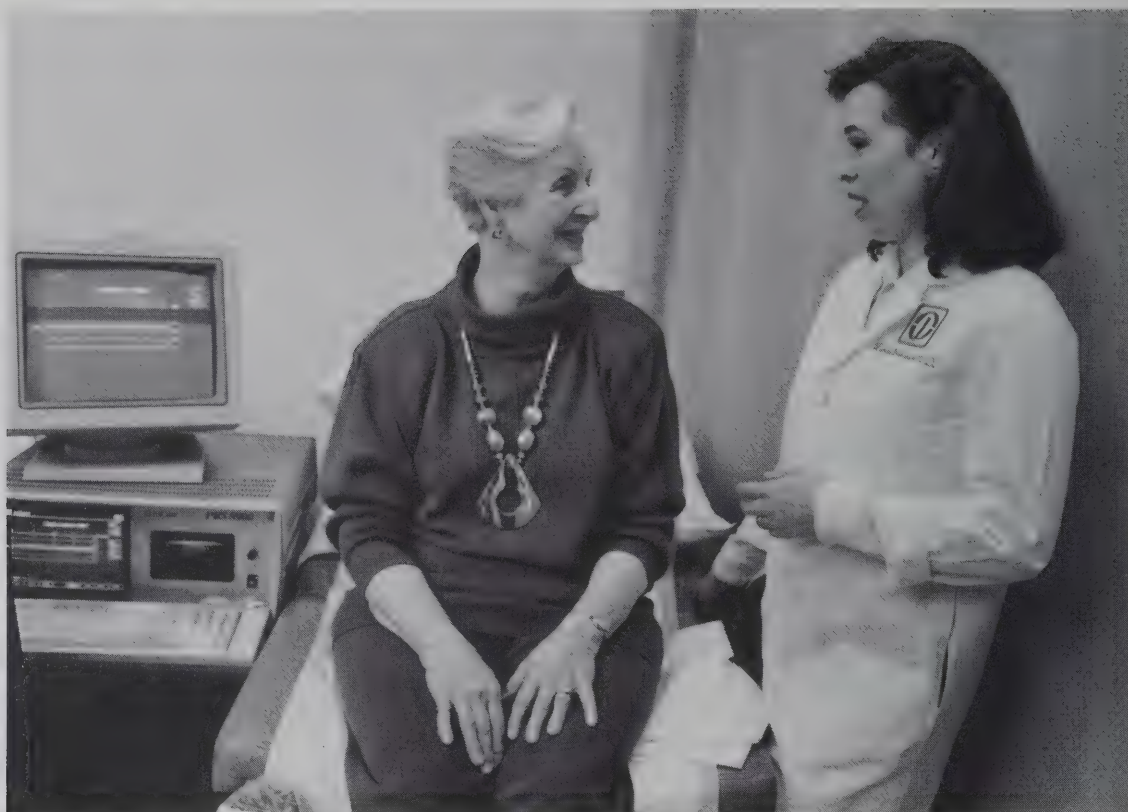
## Urogynecology

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***Linda Brubaker, M.D., Director***

The Section of Urogynecology is involved in the care of women with lower urinary tract and complex pelvic floor dysfunction. Research interests within the section involve the investigation of various forms of nonsurgical therapy as well as comparative surgical trials for urinary incontinence. Investigations of lower urinary tract dysfunction interface with problems involving genital prolapse and dysfunction. The section acts as a tertiary referral source for patients with complicated urogynecologic problems throughout the Midwest.

A fellowship is offered within the Section of Urogynecology, which is one of only nine such positions available throughout the country. The section is involved in the activities of the



American Urogynecological Society and International Urogynecologic Association.

Members of the section are currently involved in numerous clinical projects, including experimental trials with pelvic floor stimulation for urinary

incontinence, electrodiagnosis, prevention and early identification of neuropathy, and disorders of smooth and skeletal pelvic muscle. Residents are encouraged to participate in these projects.

## Department of Ophthalmology

**William E. Deutsch, M.D.,**  
**Chairman**

**Thomas A. Deutsch, M.D.,**  
**Program Director**

Residency training in ophthalmology is a four-year program accredited by the Accreditation Council for Graduate Medical Education. Two residents are appointed each year to begin their ophthalmologic training following a pre-ophthalmology year. In this R-1 year, the rotations include internal medicine; infectious diseases; neurology; neurosurgery; plastic surgery; ear, nose, and throat surgery; general surgery; and ophthalmology. Positions are filled through the Ophthalmology Matching Program sponsored by the Association of University Professors of Ophthalmology.

The primary purpose of the ophthalmology program is to train residents in excellent medical and surgical care of

patients with all types of eye diseases. Opportunities exist for clinical and basic science research throughout the three ophthalmology years; research is not, however, a prerequisite for completion of the program.

The training program emphasizes continuity of care, with residents following patients continuously from the beginning of their training. Attending physicians are present during every clinic and are readily available for teaching on every case. The rate of development of surgical technique accelerates according to the resident's personal competence. Extraocular procedures are performed immediately after beginning the ophthalmology service. Intraocular procedures may be performed beginning in the latter half of the first year. The American Academy of Ophthalmology Basic and Clinical Science Course, a 12-volume set of manuals, is provided



## Department of Orthopedic Surgery

for each resident. The Chicago Curriculum in Ophthalmology, a city-wide basic and clinical science course, is mandatory for all eye residents. Clinical lectures and conferences are given by faculty on a regular basis. First-year ophthalmology residents spend one-half day each week learning ophthalmic pathology and preparing presentations for pathologic conferences.

Most outpatient clinical activities

occur in the Joseph and Helen Regenstein Eye Center of Rush-Presbyterian-St. Luke's Medical Center. This is a modern clinical complex with full facilities, including argon, krypton, and YAG lasers; complete ultrasonography; electroretinography; fluorescein angiography; and other ophthalmic photography, including video recording.

Inquiries should be addressed to the program director.

**Jorge O. Galante, M.D., The  
William A. Hark, M.D.-Susanne  
G. Swift Professor of  
Orthopedic Surgery and  
Chairman**

**Ken N. Kuo, M.D., Director,  
Orthopedic Residency Program**

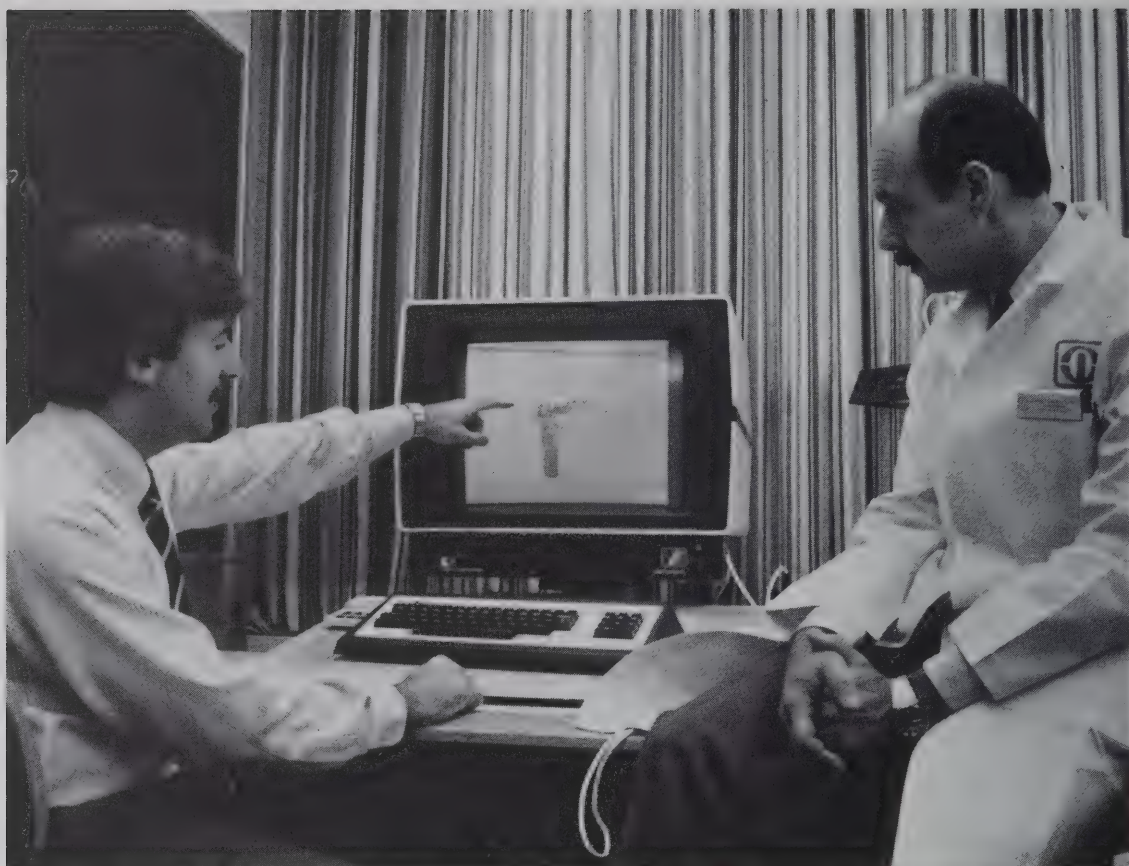
The Department of Orthopedic Surgery offers a five-year residency accredited by the American Board of Orthopedic Surgery. Four positions are available each year at Postgraduate Level 1. For those who have completed a residency in orthopedic surgery and are seeking specialized training, additional one-year postgraduate fellowships are available in joint replacement surgery, spinal surgery, surgery of the hand, sports medicine, and orthopedic research.

The prime focus of the residency is to prepare clinicians who are well trained in all facets of orthopedic surgery. In addition to ample exposure in general orthopedics, the residents participate in the care of patients with complex problems in joint replacement, spinal deformities, pediatric orthopedics, orthopedic oncology, hand surgery, adult spine surgery, foot surgery, and sports injuries. All residents are required to participate in clinical research during their training. For those who have academic interests, opportunity exists for a six-month rotation in laboratory research.

The residency program is organized on the principle of increasing resident responsibility under the supervision of the attending staff. The first postgraduate year is a rotating surgical in-







ternship with exposure to general surgery, neurosurgery, cardiovascular surgery, plastic surgery, and surgical intensive care. During the second and third postgraduate years, the resident serves as a junior house officer on the orthopedic services at Rush-Presbyterian-St. Luke's Medical Center and Christ Hospital and Medical Center. The elective rotation in orthopedic research is available during the third postgraduate year for those who have acquired a good clinical background. During the fourth year, residents spend six to nine months in pediatric orthopedic rotation at Shriners' Hospital for Crippled Children, Chicago Unit, with the remaining time serving as a senior resident at Rush-Presbyterian-St. Luke's Medical Center. The fifth postgraduate year is a chief resident position with advanced surgical and patient care opportunities at both Rush Medical Center and Christ Hospital and Medical Center.

All patients at Rush and the affiliated hospitals are available for the teaching experience. Clinical exposure encompasses a broad scope of musculoskeletal problems, including joint replacement, spine surgery, pediatric orthopedics, orthopedic on-

cology, trauma, sports injuries, hand surgery, foot surgery, and surgery for arthritis. Outpatient exposure is provided in the private offices of the attending staff, which are located in the adjacent Professional Building and the River City complex. Supervised resident clinics are held weekly to treat patients with fractures and pediatric orthopedic problems. A pediatric orthopedic rotation at Shriners' Hospital and a trauma rotation at Cook County Hospital provide additional experiences in the management of clinic outpatients. The attending staff at Rush consists of 14 full-time and four part-time board-certified orthopedic surgeons. All orthopedic subspecialties are represented.

In addition to clinical teaching, daily didactic conferences are held at Rush Medical Center. These conferences cover topics that include surgical indications, pediatric orthopedics, surgical anatomy, sports medicine, basic sciences, and the histopathology of musculoskeletal disorders. Weekly grand rounds are held on Saturday morning, and interesting cases are presented by the residents and discussed by the attending staff, along with the participation of orthopedic



surgeons from the community. Distinguished visiting professors are invited several times a year for lectures and discussions with the resident staff. Workshops on technical skills in orthopedic surgery are held during the year to give the residents additional hands-on exposure in specialized surgical skills.

The department emphasizes both basic and clinical research. A full-time staff of more than 30 professionals, including four with Ph.D. degrees, is employed in orthopedic research. The biomechanics laboratory contains a sophisticated opto-electronic gait analysis laboratory that is used in projects evaluating total-joint arthroplasty, cerebral palsy, osteotomy, and knee ligament injuries. Other areas of ongoing investigation include stress analysis of total-hip and total-knee prostheses, bone remodeling biomechanics, materials analysis of orthopedic implants, development of new prosthetic devices, new applications of bioelectricity in orthopedics, and cartilage biochemistry. The Department of Orthopedic Surgery has pioneered the use of porous materials to attach prosthetic implants to the skeleton. Research from the department has won numerous national and international awards.

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### Section of

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### Orthopedic Oncology

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***Steven Gitelis, M.D., Director***

The Section of Orthopedic Oncology is responsible for the diagnosis and treatment of musculoskeletal neoplasms, which include soft-tissue tumors primarily of the extremities and primary bone tumors. The section sees approximately 100 new tumor patients per year.

The management of primary bone and soft-tissue tumors emphasizes the concept of limb salvage. The approach is to remove the neoplasm and reconstruct the limb to provide return of function. Limb salvage requires extensive knowledge and experience in

bone transplantation, prosthetic replacement, and tumor biology. In addition to the clinical care of patients with musculoskeletal tumors, the section has developed a broad-based research program. Clinical research is being performed in tumor biology and diagnosis. Basic science research is being done in the area of tumor biology, using tissue-culture methodology and animal models.

The Section of Orthopedic Oncology is comprised of one full-time orthopedic attending surgeon and an orthopedic oncology nurse clinician. Residents and medical students rotate on the service on a regular basis. Elective clerkships in orthopedic oncology can be arranged for senior medical students. Finally, the Section of Orthopedic Oncology has, at present, a postdoctoral fellow working both in the clinical care of oncology patients and in the research laboratory. A weekly pathology conference is held each Friday in the pathology department. A biweekly sarcoma management conference is also held.

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### Section of

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### Spinal Surgery

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***Ronald L. DeWald, M.D., Director***

The Section of Spinal Surgery is dedicated to patient care, resident education, and clinical research. Diagnosis and treatment are rendered to a wide variety of spinal afflictions, including deformity, tumors, infections, fractures, and degenerative and metabolic diseases. Approximately 700 new spinal patients are evaluated each year, providing a broad base for resident education. Four to six spinal operations are performed each week, employing the latest techniques and instrumentation.

The Section of Spinal Surgery emphasizes the team approach to patient care. The section is comprised of four orthopedic spine surgeons and three clinical nurse specialists. The section also offers three fellowship positions



for board-eligible orthopedic surgeons. Residents become part of the team and are expected to be active participants in patient care. Resident participation includes diagnostic evaluation in an office setting, pre- and postoperative care in the hospital, and surgical responsibility in the operating room. Residents assume an increasing role in patient care commensurate with their ability and interests.

Daily rounds are conducted by the attending staff to provide residents with exposure to bedside diagnostic skills and teaching. The Section of Spinal Surgery is an integral part of the Department of Orthopedic Surgery. The residents continue to attend grand rounds, teaching conferences, and training programs.

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## Section of

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## Sports Medicine

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***Bernard R. Bach, Jr., M.D.,  
Director***

The mission of the Section of Sports Medicine is to achieve regional and national recognition and leadership in the care of athletes at all levels of skill, in all sports, and of all ages. Patient care, clinical and basic science research, and resident and fellow education comprise the foundation of the program.

Clinical problems are cared for by two full-time orthopedic sports medi-



cine surgeons, two orthopedic fellows, one primary care sports medicine fellow, an office-based orthopedist, an office-based primary care physician, a nurse clinician, and numerous certified athletic trainers. Clinical problems, such as meniscal tears, anterior cruciate ligament (ACL) and other ligament injuries, patellofemoral disorders, shoulder instability, impingement syndrome, rotator cuff tears, and shoulder arthritis are the major clinical entities encountered in our office practices. Stress fractures, overuse syndromes, foot and ankle pathology, and athletic trauma (fractures) are also treated. Our two full-time orthopedists have nearly 6,000 office visits annually, and they performed more than 600 surgical cases last year. State-of-the-art arthroscopic knee ligament and shoulder reconstruction procedures are performed by the staff, who emphasize current principles of nonsurgical and postsurgical rehabilitation.

The section holds a weekly sports medicine conference for residents and fellows, along with a weekly reading club. The section also conducts continuing education sports medicine courses for primary care physicians, physical therapists, and athletic trainers, and holds arthroscopy workshops. Rotations for visiting international fellows, visiting residents, and medical students are available. Residents and fellows have the opportunity to provide event coverage for local high school and club sports, thus expanding their educational experience as well as providing much-needed preventive medicine.

Clinical research among knee and shoulder surgery patients is being conducted. Use of the KT-1000 arthrometer to objectify pre- and post-reconstruction knee laxity indices continues to be investigated. Biomechanical gait analysis studies are being conducted on ACL-deficient and ACL-reconstructed patients. Studies of keratin sulfate proteoglycan correlated with arthroscopic pathology and investigations of new models for arthritis are being evaluated.

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## Section of Orthopedic Research

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**Thomas P. Andriacchi, Ph.D.,  
The Claude N. Lambert,  
M.D.-Helen S. Thomson  
Professor of Orthopedic  
Surgery and Director**

The research program in the Department of Orthopedics is divided into three basic science categories: biomechanics, biomaterials, and biochemistry. The common goal that links these diverse scientific disciplines is their association with the prevention, treatment, and understanding of musculoskeletal diseases. Researchers in each of these basic science disciplines interact with clinicians to address both basic and clinically relevant research problems. The educational aspects of the program include pre- and postdoctoral training and basic sciences for orthopedic residents and clinical fellows. More than 30 technical and professional staff members are involved in orthopedic research. Seminars and projects are carried out in close collaboration with the departments of biochemistry, rheumatology, and pathology, as well as several universities and the National Institutes of Health.

Following is a description of the basic research program:

(1) Biomechanics Program—Thomas P. Andriacchi, Ph.D., Director. The biomechanics program applies basic principles from mechanics to the study of the human musculoskeletal system. Current research activities include the functional analysis of patients treated with various types of total-joint replacement. Studies are continuing on sports-related injuries and the use of biomechanical functional evaluation to analyze various injuries and treatment modalities. The laboratory also uses analytical techniques to model the musculoskeletal system mathematically.

(2) Biomaterials Program—Jorge O. Galante, M.D., Director. The use of titanium materials attached by a bone ingrowth to replace defects in the skeletal system has been a notewor-

thy development from our laboratories. Factors that control bone in-growth and remodeling are under investigation. A new program is under way in the department to quantitate specific mechanical parameters and their relationship to a biological response in bone. There is also an ongoing study of the metal ion released from various implant materials to calculate potential toxic or carcinogenic effects of the metals in the body.

(3) Biochemistry Program—Tibor Glant, M.D., Ph.D., Director. The primary emphasis of this program has been on the biosynthesis of proteoglycan factors influencing cartilage. It is believed that understanding the molecular mechanisms of this process will lead to improved treatment for degenerative diseases, such as osteoarthritis.

Low molecular weight proteins extracted from cartilage are also being

studied. Research is being done on the molecular organization of the extracellular cartilage matrix, including changes that occur during the differentiation of epiphyseal cartilage, calcification, and replacement by bone and during osteoarthritic lesions. Current studies concentrate on the separation and characterization of the anti-invasion factor, its mechanism of action, and the biochemistry of the specific growth inhibitory factor.

Current research programs also include molecular biology and molecular immunology of cartilage matrix components, isolation and characterization of proteoglycan-specific T-cell clones and monoclonal antibodies with arthritogenic potential, cartilage transplantation, and the study of bone resorption following joint replacement.

Inquiries regarding the program should be directed to the program director.

## Department of Otolaryngology and Broncho- esophagology

***David D. Caldarelli, M.D., The  
Stanton A. Friedberg, M.D.,  
Professor and Chairman***

The Department of Otolaryngology and Bronchoesophagology offers a five-year residency program fully accredited by the American Board of Otolaryngology. The training program admits one resident per year. The first year of training is in general surgery and the remaining four years are in otolaryngology. Under the direct supervision of the full-time and part-time attending staff, the residents assume full responsibility for preoperative, operative, and postoperative patient care.

At network and area hospitals, separate clinical and surgical rotations in facial plastic surgery and neuro-otologic surgery and pediatric otolaryngology provide supplemental training.

Hospital admissions are approximately 300 patients annually, with an average daily census of seven. Because of changes in insurance carriers, many of the otolaryngology surgical procedures are done on an out-

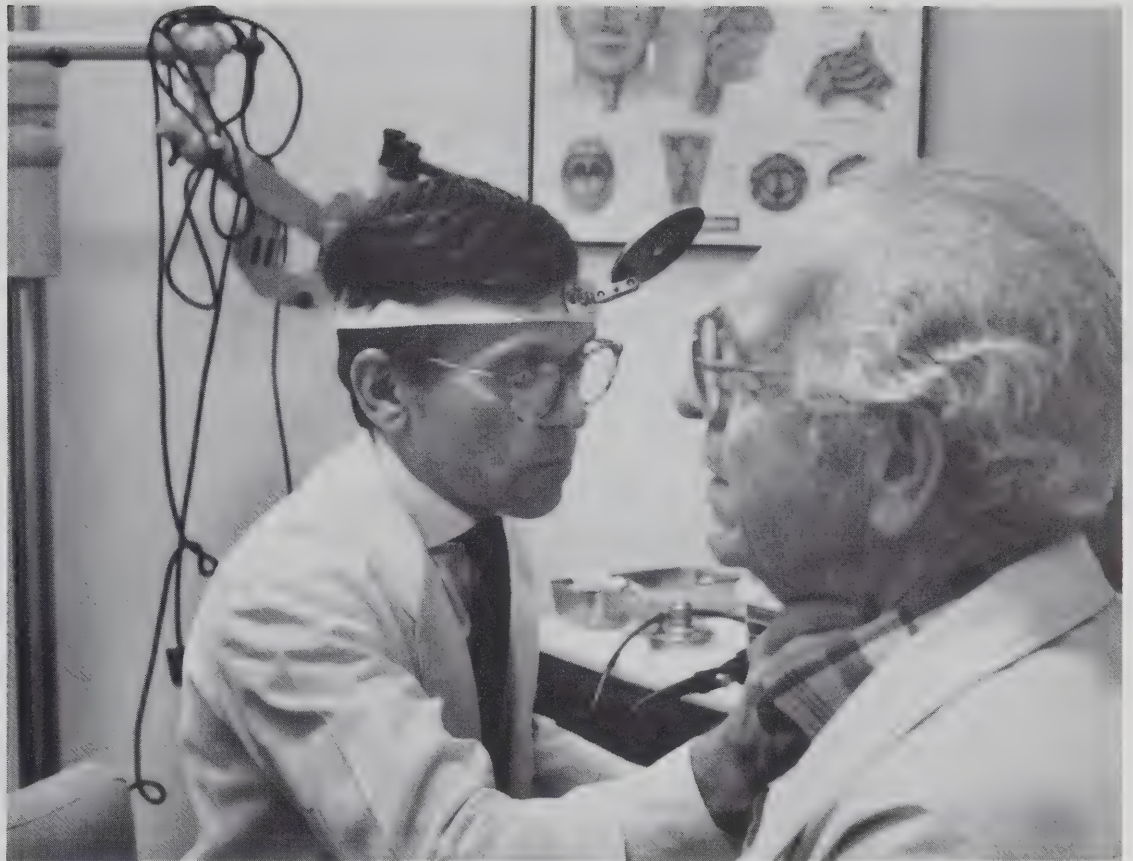
patient or same-day admission basis.

The outpatient otolaryngology clinic, which is held four days per week, averages approximately 7,200 outpatient visits per year. In addition, a weekly multidisciplinary tumor clinic is staffed in conjunction with therapeutic radiology and medical oncology. Clinical instruction is supervised by the part- and full-time attending staff. Annually, 1,500 surgical procedures provide residents with experience in microscopic otology, head and neck oncology, craniofacial anomaly, maxillofacial traumas, head and neck reconstructive surgery, facial plastic surgery, and bronchoesophagology. Extensive head and neck laser and cryosurgery experience is also available.

Residents are exposed to basic laboratory or clinical research. Research currently involves assessment of chronic middle ear disease, airway problems in association with craniofacial anomalies, the cytologic aspects of head and neck tumors, and the pathophysiology of sleep apnea syndrome.

In conjunction with the Department





of Pathology, several biologic markers, including cytokeratin K19 and nucleolar organizing regions, are being investigated and correlated with flow cytometry as predictors in head and neck cancers.

In conjunction with the Department of Therapeutic Radiology and the Section of Medical Oncology, the efficacy of adjunctive chemotherapy in head and neck cancer is being studied.

In conjunction with the Section of Communicative Disorders, head and neck cancer patients continue to be studied as they receive comprehensive rehabilitation services. Speech and swallowing outcomes are evaluated by a variety of means, including videofluoroscopy, videoendoscopy, and videostroboscopy, which are also used for the evaluation of patients with voice disorders.

The residents are expected to pursue a clinical or basic laboratory research project during their training. In addition, residents are expected to present research papers at local and national meetings. Each resident is afforded the opportunity to attend a national specialty meeting or postgraduate medical education course in each year of training.

Inquiries concerning the program should be directed to the department chairman.

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### Section of

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### Communicative Disorders

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***Dianne H. Meyer, Ph.D.,  
Director***

The Section of Communicative Disorders is an integral part of the Department of Otolaryngology and Bronchoesophagology. More than 5,000 patients (neonatal through geriatric) are seen annually for audiologic assessment, vestibular assessment, speech/language evaluation or therapy, and voice evaluation or therapy. Rotations through the section can be arranged to include case observation and tutorial sessions.

The second-year otolaryngology resident spends one full month in the section during that year. In addition, formal lectures, case studies, and inservices are provided to otolaryngology residents throughout the academic year. Lecture and discussion

## Department of Pathology

topics include auditory/vestibular problems, anatomy and physiology, hearing science, principles and interpretation of audio-vestibular testing, impedance audiometry, central auditory function, and evoked potentials.

**Meryl H. Haber, M.D., Acting  
Chairman and Director,  
Resident Training Program**  
*Victor E. Gould, M.D., Senior  
Surgical Pathologist*  
*Kenneth J. Bloom, M.D., Director  
of Operations*

The Department of Pathology offers a five-year residency in anatomic and clinical pathology fully accredited by the American Medical Association. Optional one- to two-year fellowships are offered for additional training in surgical pathology subspecialties, clinical pathology, or research. On completion of training, all residents are qualified for examination by the American Board of Pathology.

The objective of the program is to provide residents with in-depth education in all facets of modern diagnostic pathology and laboratory management. The program is intellectually intensive. Residents are expected to master both theoretical and practical material. One goal of the program is to train pathologists who compete for outstanding positions in either academic or community medical centers and who have the requisite training to assume a leadership role in their profession.

The training involves a three-year core experience with an additional two years of in-depth experience in selected specialty areas. The core experience provides the resident with an introduction to all facets of anatomic and clinical pathology and exposure to a broad range of case material. In addition to rotations in surgical pathology, cytopathology, and autopsy pathology, the resident rotates through all of the major clinical pathology laboratories. Although the strength of the Rush program has traditionally been disproportionate in anatomic pathol-

Other topics include swallowing, videofluoroscopy, videostroboscopy, electroneuronography, speech physiology, and the neurogenic aspects of speech.

ogy, this orientation has changed in recent years. Clinical pathology at Rush has emerged as a strong discipline. The program is structured so that there are anatomic and clinical pathology rotations in each of the first four years. In addition, time is allocated for electives so that residents can begin to explore areas in which special competency training may be acquired in the fifth year of training. In addition to the usual rotations of a pathology resident, this program offers a unique rotation in laboratory management and informatics.

All rotations include participation in numerous clinical and teaching conferences. The Department of Pathology at Rush plays a central role in the educational programs of many other clinical departments. These educational activities afford pathology residents abundant opportunities to gain skills as clinical consultants.

Residents electing to pursue anatomic pathology or clinical pathology exclusively select a research topic and begin investigative work under the supervision of senior investigators. Excellent research opportunities are offered in electron microscopy, cytopathology, cancer biology, and medical informatics. Research-oriented residents are encouraged to attend basic science seminars and lectures, take relevant course work for purposes of enrichment, and attend national meetings. Because the research laboratories are close to the service laboratories and the library of Rush University, residents can monitor the activities of the laboratory services while engaged in active research programs. This opportunity permits residents to study material from a large number of interesting and unique cases throughout their training. In addition to the broad-based



training offered at Rush-Presbyterian-St. Luke's Medical Center, electives can be arranged at other Chicago institutions in forensic pathology and

pediatric pathology.

Inquiries concerning the program should be directed to the program director.

***Samuel P. Gotoff, M.D., Woman's Board Professor of Pediatrics and Chairman; Director, Pediatric Residency Program***

The Department of Pediatrics is engaged in patient care, teaching, and research. Clinical programs range from neonatal and pediatric intensive care to secondary and tertiary care on general inpatient units and a variety of ambulatory care programs. The Medical Center serves as a perinatal center for a network of 11 community hospitals. It provides transport services for critically ill newborns and children.

The department's research includes the following: antibiotic prophylaxis in patients with cystic fibrosis, classification of sepsis in the pediatric intensive care unit, complement activation in glomerulonephritis, cytokines in portal venous blood, effect of hypoxemia on liver function, effectiveness of ketamine for sedating critically ill patients, effectiveness of crypt cell differentiation, hyperlipidemia in chronic renal failure, immunobiology of amyloid P component, in utero cocaine effect on postnatal respiratory control, intestinal factors that control liver function, long-term neurodevelopment follow-up of intracranial hemorrhage and periventricular leukomalacia in premature infants, molecular biology of cardiac growth and development, objective measures for medical student evaluation, pain management of hospitalized children, prenatal diagnosis of dihydropteridine reductase deficiency, prevalence of G6PD in hospitalized patients, prevention of neonatal necrotizing enterocolitis, protein-bound homocystine in patients with coronary heart disease, psychological aspects of patient controlled analgesia, role of estrogen in normal bone growth, three-dimensional reconstruction of noninvasive cardiac images, treatment of childhood malignancies, ven-

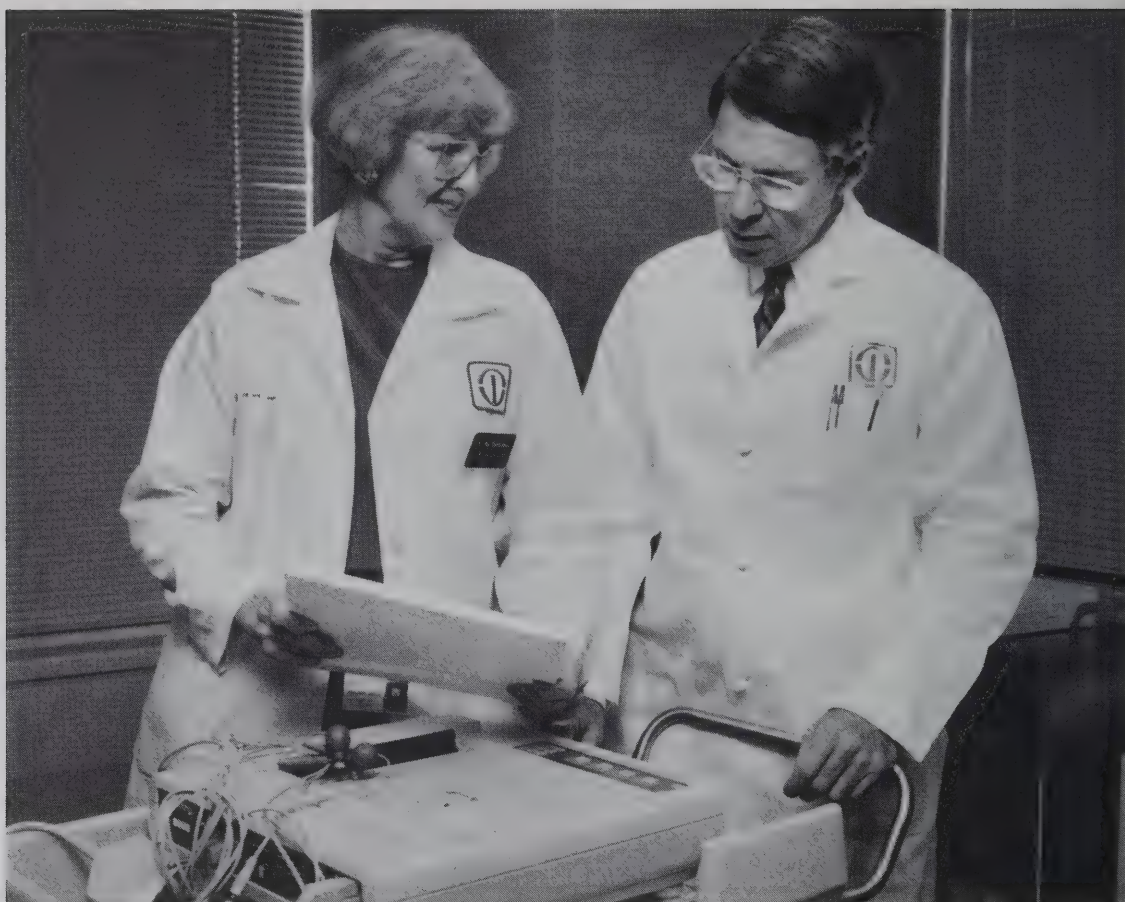
tilator weaning criteria to pediatric patients, and ventricular function after cardiac surgery.

**Residency Program**

The Department of Pediatrics offers a three-year residency program leading to certification by the American Board of Pediatrics. Our goal is to provide a broad and in-depth pediatric educational experience that will allow residents the opportunity to develop their skills, knowledge base, and intellectual approach to patients in order to prepare for general pediatric practice or subspecialty fellowship training.

Ten residents are matched each year. Residents staff the inpatient and intensive care units, pediatric emergency department, and continuity of care clinic. They rotate through an HMO and private pediatricians' offices and through the Rush subspecialty clinics, Shriners' Hospital for Crippled Children, Misericordia Hospital for severely handicapped children, and Christ Hospital and Medical Center.

The Pediatric Residency Program is based on the philosophy that there is a logical progression of skills that should be mastered during each year of pediatric training. The first year emphasizes the acquisition of information-gathering skills (history-taking and physical examination), identification of problems, assessment of the degree of illness, mastery of technical skills, and learning to care for children with acute and chronic diseases. For the most part, these experiences take place on inpatient services under the supervision of senior residents and faculty. In the first year, each resident has one rotation on the general inpatient service at Christ Hospital and Medical Center for exposure to suburban practice. There are additional rotations in psychology and development, pediatric surgery, and ambulatory pediatrics during the first year.



Second-year residents are then prepared for independent management of diverse and unselected pediatric problems in acute-care and emergency-room settings. In the second and third year, residents elect subspecialty areas for in-depth study. Except for neonatal intensive care and critical care pediatrics, specific subspecialty rotations are not required. Elective rotations are available in every subspecialty and sufficient elective time is provided to fulfill residency review requirements. In the second year, Rush residents have one rotation in the Christ Hospital and Medical Center emergency medicine program to increase their exposure to major trauma, minor surgery, and orthopedics.

The third year of pediatric training emphasizes supervision of inpatient units, responsibility for patients with the most complex problems, and interaction with consultants and other members of the health care team. Third-year residents are expected to stabilize and transport acutely ill newborn infants and older children to the Medical Center. In addition, senior residents are responsible for teaching

interns, medical students, and family practice residents from Rush/Christ and other Chicago hospital programs. A fourth-year chief resident with special skills in patient care and teaching is chosen from the third-year residents. The chief resident helps oversee and supervise academic and clinical activities.

Each resident participates in a continuity of care clinic one-half day each week during the three years of residency. Under the supervision of a general pediatric preceptor, residents care for well children who require health maintenance and children with acute or chronic medical problems. The residents establish relationships with their patients and are responsible for their care throughout the residency. Each session begins with a conference on a primary care topic as guided by an established curriculum.

Night and weekend call comes every fourth night throughout the three years. On average, residents are free of hospital responsibilities one full weekend in every four. Each year, residents get three weeks of vacation (usually divided into two parts) and one week for educational



leave to pursue in-depth study or attend a meeting.

The teaching program consists of a morning report, attending rounds, chief-of-service rounds, grand rounds, and daily didactic sessions. Introductory lectures in pediatrics are given during the summer. The lecture/conference series includes pediatric medical and surgical subspecialty topics, as well as topics in research, the basic sciences, and ethics, morbidity and mortality conferences, and a journal club. The teaching program emphasizes the problem-oriented medical record as a tool to organize an approach to complicated pediatric cases. Thus, a lifelong approach to learning and an analytical way of thinking about patients is systematically taught in addition to traditional didactic material.

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**Division of**

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**General Pediatrics**

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***Anthony J. Richtsmeier, M.D.,  
Director***

The Division of General Pediatrics is made up of the sections of adolescent medicine, behavioral pediatrics, pediatric emergency medicine, and general pediatrics, including the normal newborn nursery and outpatient services.

The focus of the Section of Adolescent Medicine, headed by Gary Strokosch, M.D., is comprehensive health care for patients who are approximately 12 to 21 years of age. Outpatient teen clinics and the adolescent inpatient population provide the settings for training in this field. The division takes special interest in eating disorders and other psychosocial and medical problems specific to this age group.

The Section of Behavioral Pediatrics services a wide variety of pediatric problems that have a strong psychobehavioral connection. Special emphasis is placed on integrating psychosocial and biological factors in the assessment and care of children

and families. Behavioral pediatrics works closely with the Sections of Child Psychology and Psychiatry, is active in teaching, and offers electives to house staff and students. A major focus of the section involves pediatric pain management.

The Section of Pediatric Emergency Medicine, headed by Jane Kramer, M.D., provides care to approximately 12,000 pediatric patients annually. The program is designed to prepare residents to provide for the acute-care needs of children and adolescents. Residents in pediatrics, family practice, and emergency medicine obtain training in the Rush pediatric emergency department. Residents are directly supervised by pediatric faculty and given continuous support from the Medical Center's consultative services.

The Section of General Pediatrics coordinates patient care and house staff training in the newborn nursery and resident continuity of care clinic, and general pediatric care in the ambulatory setting.

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**Section of**

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**Allergy/Clinical Immunology**

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***Anita T. Gewurz, M.D.,  
Director***

The Allergy/Clinical Immunology Program is a combined pediatric/internal medicine training program that emphasizes care of patients with allergic, autoimmune, and immunodeficiency disorders. Patients are seen in an outpatient clinic and on inpatient pediatric and medicine units of Rush-Presbyterian-St. Luke's Medical Center. Research opportunities are available in the Department of Immunology/Microbiology in a variety of areas, including the biology of the allergic response, host defense mechanisms, acute-phase proteins, and complement. Elective rotations are available for residents, and a two- or three-year fellowship program has been approved by the American Board of Allergy and Immunology.

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**Section of**

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**Pediatric Cardiology**

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***Anthony Cutilletta, M.D.,  
Director***

The Section of Pediatric Cardiology is part of the Heart Institute for Children, which provides extensive multidisciplinary programs in pediatric cardiovascular disease. The section services a network of referring hospitals and physicians in the Chicago metropolitan area. Innovative high-quality care is provided both in an inpatient and outpatient setting. All members of the Heart Institute for Children participate in both undergraduate and graduate medical education programs. The curriculum covers both the inpatient and outpatient evaluation and care of pediatric heart disease as well as invasive and noninvasive diagnosis. Training is provided through the inpatient service, clinical and teaching conferences, and the ambulatory care units.

The resident may also participate in various research activities, including the molecular biological study of cardiac growth and development, the assessment of ventricular function after cardiac surgery, extensive evaluation of the conduction system of the heart, and the three-dimensional reconstruction of noninvasive images.

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**Section of**

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**Gastroenterology and Nutrition**

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***Richard Sandler, M.D., Director***

The Section of Gastroenterology and Nutrition evaluates and manages the full range of gastroenterologic, hepatologic, and nutritional problems in children, including pediatric liver and bowel transplantations. The resident's clinical experience includes diagnostic procedures, such as endoscopy and liver biopsy, and consultation on the inpatient intensive care unit for

ambulatory patients and on a busy pediatric nutritional service. The section also trains pediatric residents and medical students, and conducts research on pediatric liver disease, metabolism, and energy use.

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**Section of Genetics,**

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**Endocrinology**

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**and Metabolism**

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***Paul Wong, M.D., M.S.C., Director***

This section provides clinical care, resident and medical student training, and an active research component in genetics, metabolism, and endocrinology.

Clinical training in genetics and metabolism includes evaluation and treatment of infants and children with physical malformations, mental retardation, metabolic disorders, and other inherited diseases, as well as counseling for couples with abnormal children, recurrent miscarriages, fertility problems, or a history of genetic disorders. Laboratory training includes chromosome studies in blood, bone marrow, amniotic cells, and CVS, as well as biochemical studies. Research activities focus on the pathophysiology of homocysteinemia in vascular diseases.

Inpatient consultation and outpatient clinics in pediatric endocrinology provide services for children with diabetes mellitus, growth disorders, ambiguous genitalia, and other endocrinologic problems, under the supervision of Mary Kreiter, M.D.

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**Section of Pediatric**

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**Hematology/Oncology**

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***Alexander M. Green, M.D.,  
Director***

The Section of Pediatric Hematology/Oncology provides inpatient and outpatient care of children with serious



disorders of the blood or with malignant tumors. Patients with leukemia and solid tumors are treated under regimens directed by the Pediatric Oncology Group. Residents actively participate in the bone-marrow transplant program.

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## Section of

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## Infectious Diseases

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***Kenneth M. Boyer, M.D., Director***

Caring for children with infectious diseases is the most frequent care provided by practicing pediatricians. The Section of Infectious Diseases offers consultation in the management of children with serious infections and

diagnosis of problems likely to have an etiology in infections. Residents provide consultations under the supervision of the pediatric infectious disease faculty, participate in daily rounds and two weekly conferences, teach pediatrics to elective students, and are encouraged to study their patients in-depth. Residents may also elect to spend four weeks in a small-scale independent research project that emphasizes the development, analysis, and presentation of clinical or epidemiologic data. Residents on elective rotation are encouraged to become familiar with the section's ongoing research programs that deal with the immunology of neonatal group B streptococcal infections and chemotherapy for congenital toxoplasmosis.



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## Section of

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### Intensive Care

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***William Hayden, M.D., Director***

The Section of Intensive Care provides evaluation and treatment of the very sickest hospitalized children. The 12-bed pediatric intensive care unit draws patients from hospitals throughout the metropolitan Chicago area. The training program prepares the resident to take care of severely ill children by emphasizing initial evaluation, a systematic approach to the organization of care, and resuscitation efforts. Training in technical skills is also emphasized.

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## Section of Neonatology

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***Robert Kimura, M.D., Director***

The Section of Neonatology provides medical, surgical, and follow-up care for inborn and transferred neonates. The Medical Center's Special Care Nursery admits approximately 450 babies a year.

The Rush Perinatal Center serves 12 designated hospitals that perform 21,000 deliveries a year in the north-eastern Illinois region. Patients in the Rush perinatal network are admitted to a level III nursery via a highly specialized transport system for high-risk mothers and their sick infants.

Pediatric, obstetric, anesthesiology, and family practice residents rotate through the newborn service at Rush. The section emphasizes patient care and educational programs tailored to the year of training. There is an active research program and strong specialty service support.

A long-term, multidisciplinary follow-up program includes social services, psychology, physical and occupational therapy, neurology, and other required subspecialties. Much of the on-

going care for these high-risk infants is provided by the residents through the continuity of care clinics.

The **Center for SIDS Research and Disorders of Respiratory Control** is dedicated to the evaluation of infants at risk for sudden infant death syndrome and patients with obstructive sleep apnea, apnea of infancy, apparent life-threatening events, apnea of prematurity, and alveolar hypoventilation. Patients are also evaluated for use of diaphragm pace-makers. The center follows the world's largest pediatric population of patients with idiopathic congenital central hypoventilation syndrome and patients with diaphragmatic pace-makers.

The research interests of faculty members include evaluation of infants at high risk for SIDS by documented monitoring, the mechanism for control of breathing in children with central hypoventilation syndrome, the physiologic and histochemical effects of diaphragm pacing, and the effects of prenatal cocaine on postnatal respiratory control.

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## Section of

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### Pediatric Nephrology

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***Jonathan Heiliczer, M.D., Director***

Activities in this section include both diagnostic and therapeutic management of all renal problems seen in children, ranging from those of a structural nature to those of immunologic import. Implicit in this program is close liaison with the urology service, in an effort to provide an integrated approach to small children with congenital or acquired structural abnormalities. Acute as well as chronic peritoneal dialysis and hemodialysis are available in addition to an acute transplant program.



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**Section of**

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**Pediatric Neurology**

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***Peter T. Heydemann, M.D.,  
Director***

The Section of Pediatric Neurology offers postgraduate training for residents in pediatrics, neurology, family practice, neurosurgery, and psychiatry. Electives are designed to meet the needs of the varied backgrounds and interests of the individual house officers. Responsibilities may include inpatient management, child neurology consultations (for outpatient care, child neurology visits, and care of multiply handicapped children, e.g., children with meningomyelocele), and clinical care in the muscular dystrophy clinic. Regular conferences offer opportunities for didactic learning as well as resident presentations.

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**Section of**

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**Pediatric Psychology**

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***Michael Nelson, Ph.D., Acting  
Director***

Psychologists in this section service the pediatric patient from infancy through young adulthood on both an inpatient and outpatient basis. A broad range of diagnostic, therapeutic, and consultative services emphasizes early assessment and intervention, family involvement, and close collaboration with medical and other health-care staff.

The faculty, an interdisciplinary group of clinical and developmental

psychologists and pediatric ancillary professionals, is responsible for teaching the developmental/psychosocial curriculum of the pediatric residency training program. In addition to the educational opportunities inherent in the collaborative patient care that characterizes the pediatric service, formal training activities in developmental, psychosocial, and behavioral aspects of patient care are provided in a required subspecialty rotation.

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**Section of**

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**Pulmonary Diseases**

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***Lewis Gibson, M.D., Director***

This section provides care for a large number of children with cystic fibrosis and bronchopulmonary dysplasia. An active pulmonary function laboratory supports the program.

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**Section of**

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**Pediatric Surgery**

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***Deborah Leoff, M.D., Director***

This section provides care for the full spectrum of neonatal and pediatric surgical problems. Pediatric residents rotate in the surgical service, allowing them an opportunity to observe and participate in common pediatric surgical procedures. Perioperative management of intensive care, neonatal, and general pediatric inpatients is an important part of the pediatric resident's training.

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## Department of Physical Medicine and Rehabilitation

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**John J. Nicholas, M.D.,  
Professor and Program  
Director**

The Department of Physical Medicine and Rehabilitation provides postgraduate resident training in physical medicine and rehabilitation through both a three-year specific physical medicine and rehabilitation program and a four-year integrated program.

Residents who wish to enter the three-year specific program will obtain a postgraduate (PGY-1) transitional year of residency at an institution of their choice; those who wish to enter the four-year integrated program will obtain one of the positions reserved for physical medicine and rehabilitation residents in Rush's Department of Internal Medicine.

The transitional year, which is part of Rush's four-year integrated program, consists of eight months of internal medicine, two months of neurology, and two months of rheumatology. The residency program provides a wide variety of patient care experiences at Rush and its affiliated institutions. Graduates will be thoroughly prepared to treat rehabilitation patients with a wide variety of problems. A resident may also use the program to build a foundation for an academic or a research career.

Residents are educated at Rush and several affiliated institutions. The Department of Physical Medicine and Rehabilitation at Rush has physician offices and outpatient facilities in the Professional Office Building and two inpatient units in the Johnston R. Bowman Health Center for the Elderly. The first is a 44-bed specific geriatric rehabilitation unit. This unit is one of a few in the United States designed specifically for rehabilitation of those over the age of 60. Physicians and therapists are all specially trained to provide care appropriate to the elderly. In addition, a 22-bed unit for adults (over the age of 18) offers care for all but pediatric patients.

Residents rotate through the Marianjoy Rehabilitation Center, a 110-bed freestanding rehabilitation center in Wheaton, Ill. This institution has units for spinal cord injury, stroke,

brain injury, pediatric, pain management, and musculoskeletal and neurologic rehabilitation patients. It provides directly, or through collaboration, all levels of care. Two unique services are the Center for Occupational Rehabilitation and the Fitness Center for the Disabled. There are nine physiatrists on staff. The program has a well-established record of resident teaching and research activities.

Residents also rotate through Oak Forest Hospital, a county hospital with 65 rehabilitation beds and a strong faculty, located in a southern suburb of Chicago. Oak Forest Hospital has provided generous educational support for the training program.

Residents train at Rush Medical Center and Oak Forest Hospital in their first year. They then proceed through consultation services at Rush and categorical services at the Marianjoy Hospital. During their final year, they spend one rotation at Grant Hospital to experience an inpatient rehabilitation unit in a community hospital.

Residents obtain electromyographic experience in a four-month period, one-half of the time at Rush and one-half at MacNeal Hospital. Residents are taught by the neurology department at Rush in a didactic program tailored to their needs. They then spend an equal amount of time learning practical hands-on electrodiagnostic studies under the care of psychiatrists at MacNeal and other associated hospitals. Residents can plan to observe or perform 200 to 300 studies during their experience.

Training in prosthetics is undertaken at Rush, Marianjoy, and Oak Forest Hospital. In addition, residents see a large number of patients during inpatient rotations. A course based at the Hines V.A. Hospital provides third-year residents with a prosthetic course annually. Residents can expect to see a wide variety of amputees and become thoroughly acquainted with prescription writing and the training of prosthetic patients.

Rush-Presbyterian-St. Luke's Medical Center has an unusually large group of neurologic patients with movement disorders. These patients,





the majority of whom have Parkinson's disease or multiple sclerosis, are frequently transferred to the adult and geriatric units for rehabilitation.

Pediatric training is obtained in several areas. A two-month rotation at the Marianjoy Rehabilitation Center provides residents with inpatient and outpatient experiences. An additional two-month rotation at Loyola University Medical Center and at Shriners' Hospital provides experience with inpatients and outpatients. Residents attend muscular dystrophy and cerebral palsy clinics while on the electromyographic service at Rush.

Training in the care of spinal cord patients is obtained both at Oak Forest Hospital and Marianjoy Rehabilitation Center in the spinal cord units. These units have large patient populations, support groups, therapists, and fine physical facilities.

Training in the care of patients with closed head injuries is also provided at Marianjoy and Oak Forest Hospital. Residents obtain training in the care of stroke patients on the geriatric service at Rush, Oak Forest Hospital, and Marianjoy Hospital. A comprehensive stroke care program has been organized in conjunction with the Department of Neurological Sciences

at Rush, and it provides a better-than-usual experience in the acute-care and rehabilitation needs of stroke patients.

Residents are not required to perform a research rotation. They are strongly urged to prepare case reports and brief projects for presentation as a podium or poster presentation at the annual meetings to which they will be sent. If a resident shows persistent interest in research, his or her projects will be supported and equipment provided. When appropriate, a project may be designed in conjunction with the Rush-Presbyterian-St. Luke's rehabilitation laboratory or with Marianjoy.

Residents obtain outpatient training at many sites during the residency program. There is a specific two-month rotation at the Marianjoy Rehabilitation Hospital where only outpatient care is performed. At all other institutions, including Rush, residents attend their attending physicians' outpatient clinics. Prosthetic clinics are available and should be attended at all three institutions.

A consult service is run specifically for one or two rotations at Rush-Presbyterian-St. Luke's Medical Center. This consult service has been estab-

lished for many years and is an extremely well-designed and useful training experience.

In addition to regular rotations, several didactic courses have been designed for the residents. In July and August of the first year (PGY-2), two afternoons a week are devoted to study and dissection of the limbs and back, using cadavers in the Department of Anatomy at Rush University. This is an especially useful program for subsequent electromyographic experience. Later in the first year, a neuroanatomy course is given by the Department of Anatomy of Rush University. This course offers brain-cutting experience as well as a newly developed computer-oriented three-dimensional neuroanatomy course. Courses in kinesiology, orthotics, and prosthetics are also provided.

Didactic programs have been established at three major affiliated institutions. At Rush, residents are expected to attend weekly chairman's rounds, journal club, patient case presentations, rehabilitation grand rounds, and various other activities, including stroke grand rounds. Prosthetic clinics and musculoskeletal radiologic review sessions are held twice monthly.

Marianjoy Rehabilitation Center has established a weekly journal club, monthly grand rounds, and board review. Oak Forest Hospital has a weekly journal club and board review.

During the various rotations, residents have a one-on-one relationship with their attending physicians. Attending physicians formally evaluate each resident, and the residents evaluate their attendings. This relationship

allows residents adequate exposure to their tutors for questions and referral to various resources.

The advantages of this residency program are many. They include a wide patient experience. Training at diverse institutions prepares our residents for most contingencies of practice. Research experience is available for residents who wish to do research later on.

Since the teaching program involves several cooperative institutions, the faculty is large and readily available. All physical medicine and rehabilitation faculty members belong to a large private practice group (Rehabilitation Medicine Clinic, Inc.), and the support provided by this group is considerable. A monthly symposium supported by a multi-institutional Research and Education Consortium of Rush Medical College brings an outstanding guest lecturer to present a one-day lecture each month to four local cooperative residency programs. The Saturday Morning Lecture Series for PGY-1 residents also draws on faculty from Rush and Loyola University and is attended by residents in both residency programs. This cooperative effort is unique to physical medicine and rehabilitation residency program. It depends, in part, on support from Rush Medical College. Chicago is a large metropolitan area with five residency programs that have cooperated in this venture. It is a real tribute to our specialty to have this many programs cooperating in resident education.

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## Department of Plastic and Reconstructive Surgery

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### ***Randall E. McNally, M.D., Acting Chairman***

This two-year graded training program in general plastic and reconstructive surgery is fully accredited by the Tripartite Conference Committee on Graduate Training sponsored by the American Medical Association, the American College of Surgeons, and the American Board of Plastic Surgery. To be considered for appoint-

ment, applicants must have completed a minimum of five years of acceptable training in general surgery that complies with the requirements of this service. Each year, one resident is selected to begin training.

At present, an average of more than 3,000 plastic surgery patients are operated on annually at the Medical Center. Plastic surgery patients encompass a wide variety of ages and types. Residents are offered bed





privileges and special operative times, and all of the patients in the hospital are available for teaching purposes.

Residents will be trained in overall preoperative surgical diagnosis and care, surgical treatment, and post-operative care of patients amenable to treatment by plastic surgery. Residents will gain more than adequate experience in the various methods of excisional and reparative surgery of the scalp, face, orbits, nose, oral cavity, neck, trunk, and extremities, as well as experience in management of neoplasms of the head and neck, cosmetic surgery, facial trauma, surgery of the hand, burns, and congenital abnormalities of the extremities and genitalia.

Cooperation with other disciplines (orthopedics, general surgery, genitourinary surgery, gynecology, bronchoesophagology, and neurosurgery) allows exceptional experience in reconstruction of the esophagus, larynx, trachea, vagina, and abdomen, and the repair of extensive encephalocele, myelomeningocele, and severe craniofacial deformities.

Residents are given ample opportunity to perform major procedures under the supervision of the attending staff. Increasing ability brings increased responsibility. To help the resident acquire skill and judgment in all phases of work, emphasis is placed on personal instruction at the bedside, in the clinic, in the operating room, and in the pathology and anatomy laboratories. Active participation in research is mandatory. The program stresses participation in weekly grand rounds, tumor conferences, surgical research projects, hand seminars, and journal reviews. Residents also spend time each week in the private offices of the attending staff.

There is a separate hand clinic where acute and extensive reconstructive hand surgery cases are seen and operated on (see hand surgery section). A large caseload of cleft lip, cleft palate, and severe craniofacial anomalies are operated on by the plastic surgery staff and residents at Presbyterian-St. Luke's Hospital.

Increased emphasis within the department is given to microvascular

surgery, both in the operating room and in the research laboratory. Both junior and senior residents are afforded the opportunity to attend major surgical meetings during the year. They are encouraged to present papers on their own or in conjunction with the attending staff. A resident will be given an appointment as instructor in the department for the entire training program.

Inquiries concerning the program should be directed to the chairman.

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## Section of

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### Hand Surgery

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***Robert R. Schenck, M.D.,  
Director***

The Section of Hand Surgery encompasses all facets of the care of the hand, including care of traumatic, reconstructive, congenital, and rheumatoid problems, and training in the

microsurgical techniques needed for the more sophisticated aspects of hand reconstruction.

Dr. Schenck is assisted by hand surgery fellows who spend a year under his direction and an orthopedic resident who does a three-month rotation. Their duties are clinical, in that they participate in the preoperative selection, operative treatment, and postoperative management of patients in the office, and also educational and research oriented. They participate in the monthly hand surgery conferences and monthly hand problem cases in orthopedic grand rounds.

A strong component of the Section of Hand Surgery involves learning and refining microsurgical techniques in the laboratory and their application to research projects relating to improved methods of microvascular surgery. The laboratory is fully equipped with two operating microscopes and staffed by a full-time technician.

Inquiries should be addressed to the section director.

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## Department of Psychiatry

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***Jan Fawcett, M.D., The Stanley  
G. Harris, Sr., Professor of  
Psychiatry and Chairman***  
*Aimee St. Pierre, M.D., Director,  
Residency Training*

The Department of Psychiatry offers a four-year program designed to educate residents through a developmental model. The resident acquires the knowledge and skills necessary to perform as an excellent physician and form the foundation for an integrated and thoughtful approach to clinical psychiatry, psychiatric theory, and research.

The psychiatry faculty is a diverse group that shares a commitment to excellence in clinical care, research, and education. They emphasize a balance of psychodynamic and biologic psychiatry. Throughout the four years, residents are taught by specialists representing a full range of approaches from psychoanalysis through behavioral neurology.

Residents work with patients with a

broad spectrum of diagnoses, including affective disorders, personality disorders, schizophrenia, obsessive-compulsive disorder, chemical dependency, and behavior disorders. This clinical experience encompasses patients in all stages of the life cycle in settings that include adult and child inpatient units, outpatient clinics, a children's day treatment program, and the general hospital and emergency room.

The residency program is divided into three phases, each of which offers instruction and experience in specific areas of psychiatry, coordinating clinical rotations with didactics and individual supervision.

Phase I, a 16-month rotation, includes a four-month internal medicine rotation and two months of neurology. Ten months of inpatient psychiatry complete this phase. Here residents develop interviewing and diagnostic skill, and become adept at taking a psychiatric history, performing a complete mental status examination, and





formulating comprehensive treatment plans. In addition, the resident learns to manage psychiatric emergencies both in the emergency room and the general hospital while on call.

Phase II lasts 16 months and completes the basic clinical training. Four months are spent on the consultation-liaison service where residents work with patients throughout the general hospital. Here they acquire knowledge of the interface between psychiatric and physical illnesses, acting as consultants to medical and surgical specialists. Twelve months of outpatient psychiatry complete Phase II, with experience in diagnosis and treatment of children, adolescents, and adults. Through classes, conferences, and individual supervision, residents in this phase further

develop their psychotherapeutic and psychopharmacologic skills, including short- and long-term dynamic individual psychotherapy, group and family therapy, and pharmacologic treatment of psychiatric disorders. Residents are encouraged to use integrative approaches to patient care, combining psychopharmacologic and psychotherapeutic interventions when appropriate.

Phase III, 16 months long, concludes the program. It includes a four-month half-time inpatient rotation that focuses on teaching junior residents and medical students, including presentation of formal lectures and case conferences as well as providing clinical supervision on the units. The remainder of this phase is elective time, allowing residents to continue with

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## Department of Psychology and Social Sciences

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long-term cases and pursue training in areas of special interest, including research. Electives may be done at the Medical Center or other institutions. Throughout this phase, residents also continue with classes and supervision designed to integrate the clinical and didactic studies of the previous years and enhance their ability to think critically about clinical and theoretical issues in psychiatry.

Departmental electives include advanced rotations in psychopharmacology and inpatient psychiatry and an elective in advanced dynamic psychotherapy. There are many opportunities for clinical research. Electives are also offered in forensic psychiatry, chemical dependency, dissociative disorders, cognitive therapy, child psychiatry, geriatric psychiatry, suicidology, and consultation-liaison psychiatry. Other electives may be arranged individually.

The department has more than 100 inpatient beds, including three general adult units, a 22-bed geropsychiatry unit, and a 15-bed child inpatient psychiatry unit within the Medical Center. At Rush North Shore Medical

Center, the department has another 31-bed adult inpatient unit and a 15-bed dissociative disorders unit. Psychiatric outpatient services in the Medical Center include a multidisciplinary staff of faculty, residents, nurses, psychologists, and social workers who offer diagnostic and treatment services to both children and adults, including a children's day treatment and school program.

There is ongoing research in many areas. Under the auspices of the Rush Institute for Mental Well-Being, the Treatment Research Unit focuses on studies in outpatient psychopharmacology. Other projects in the institute include the Center for Suicide Research and the Collaborative Study of Depression. Additional areas of research include psychotherapy, cognitive therapy, treatment of refractory depression, childhood affective disorders, treatment of sex offenders, seasonal affective disorders, dissociative disorders, depression in the medically ill, and self-psychology.

Inquiries should be addressed to Aimee St. Pierre, M.D., Program Director.

***Rosalind D. Cartwright, Ph.D.,  
Chairman***

*Martita Lopez, Ph.D., Director of  
Clinical Training*

The Department of Psychology and Social Sciences is an independently organized department of Rush Medical College, the Graduate College, and Presbyterian-St. Luke's Hospital. Department members are responsible for a behavioral sciences curriculum in the medical college and participate in course offerings in the College of Nursing. The department also offers a Ph.D. program in health psychology through the Graduate College.

The department provides clinical psychological services on a consultation basis to all inpatient medical departments. These services include answering general behavioral diagnostic questions, provision of short-term psychological interventions, and

liaison with medical staff providers. In addition, diagnostic and intervention services are provided through specialized programs in cancer, gerontology, rehabilitation, neuropsychology, pediatric psychology, pain and stress management, and sleep disorders. Outpatient services are also provided for the diagnosis and management of marital and sexual problems, for cognitive remediation, and for disorders of sleep and wakefulness.

The department also is involved in research endeavors in many aspects of interaction between psychology and medicine. A sampling of currently active research topics includes: cognitive and affective changes in patients with Parkinson's disease; assessment during the WADA procedure; innovative treatments of sleep apnea; role loss, depression, and dreaming; use of lights for resetting circadian rhythms; behavioral studies of myotonic





dystrophy; chronic hallucinosis in Parkinson's disease; assessing the changes in quality of life in patients with cancer; evaluation of malingering inpatients with low back pain; psychological characteristics of patients with long-term back disability; and cognitive decline in normal aging and in central nervous system disorders in the elderly.

The department offers a predoctoral clinical psychology residency program that is fully accredited by the American Psychological Association. Students apply to one of three specialty training programs in the residency: clinical child psychology, health psychology, and clinical neuropsychology. Approximately 60 to 70 percent of the

resident's time is spent in specialty-related training during the residency year, with the remaining time devoted to more general resident experiences, conferences, and seminars. All programs are designed to fulfill the internship requirement for doctoral programs in clinical psychology. The department also offers postdoctoral fellowships in geropsychology and psycho-oncology.

Supervision in training is provided by a staff of 25 clinical psychologists and two physicians. The residency and postdoctoral fellowships begin on July 1. Inquiries should be directed to Martita Lopez, Ph.D., Director of Clinical Training.

### ***Frank R. Hendrickson, M.D., Chairman***

The department offers a four-year program leading to qualification for the American Board of Radiology examination in therapeutic radiology, starting at the internship level. The program is accredited by the American Medical Association and the American Board of Radiology. Board-eligibility requires four years of training after medical school (of which three years are to be in therapeutic

radiology) and successful passing of a written examination and an oral exam taken one year later.

The Department of Therapeutic Radiology is housed in the Woman's Board Cancer Treatment Center and is comprised of the sections of clinical radiation oncology, medical physics, and radiation biology. The 25,000 square feet of the Woman's Board Cancer Treatment Center contains three major treatment machines with electron capabilities: a hyperthermia unit, a treatment simulator, and a

## **Department of Therapeutic Radiology**

superficial contact therapy unit with intraluminal capabilities.

The department also has special procedure rooms for minor surgical procedures, basic research laboratories, offices, and examining rooms. The radium laboratory contains 750 mg of radium isotopic equivalent for clinical use. An electronics shop provides maintenance, design, and production of special equipment.

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**Section of**

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**Radiation Oncology**

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***Anantha K. Murthy, M.D.,  
Director***

The section registers 1,200 new cancer patients per year who come for more than 15,000 treatment visits and 3,000 follow-up visits every year. These patients are seen by 10 attending staff and six house staff members. All patients are seen initially by the radiation therapy house staff for preliminary evaluation and a treatment plan before their treatment program is finalized with the attending staff.

The progress of patients' treatment is frequently evaluated and monitored by both the house staff and the attending staff. Plans for all new patients are reviewed with the department's attending and resident staffs. Patients are admitted directly to radiation therapy services, and priority operating room privileges are assigned for radiotherapeutic operative procedures.

The department has an integrated residency program with Christ Hospital and Medical Center. A three-month rotation through the radiation therapy department at Christ is mandatory. Rotation through pediatric radiation oncology occurs either in the Chicago area or at other institutions in the United States.

The didactic teaching of the residents by the attending staff is carried out through three intradepartmental clinical conferences, one physics conference, and numerous interdepart-

mental conferences on such topics as lymphoma, head and neck cancer, urology, sarcoma, gynecology, and medical oncology. Topic reviews and journal club conferences are done on assignment by rotation among the residents. Two to three visiting professors per year and radiation therapy conferences in the Chicago area provide other opportunities for learning.

New modalities, such as intraoperative radiation therapy, hyperthermia, radiation therapy administered along with sensitizing chemotherapy, whole-body electrons for lymphomas of the skin, whole-body radiation for bone-marrow transplants, endobronchial implants, and interstitial radiation for brain tumors, are performed under institutional as well as nationwide protocols. Opportunities for independent investigations are available.

Medical students from Rush and other schools who rotate through the department offer stimuli as well as a teaching challenge. In addition, first-year residents from surgery have a one-month elective rotation through therapeutic radiology.

Inquiries concerning the program should be addressed to the section director.

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**Section of**

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**Medical Physics**

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***James C.H. Chu, Ph.D.,  
Director***

The Section of Medical Physics provides service and instruction to the entire Medical Center. Its general objectives are to improve methods of disease detection, to plan and measure radiation dosage, to design new apparatus, and to protect the patient, the worker, and the public by assessing the radiation levels of the environment. These objectives are achieved through the application of physical science and engineering.

The faculty of the Section of Medical Physics of the Department of Therapeutic Radiology, together with the faculty of the Department of Medi-



cal Physics of the College of Health Sciences, is responsible for teaching radiologic physics to residents and medical students in the Departments of Diagnostic Radiology, Nuclear Medicine, and Therapeutic Radiology. The faculty has established a series of credit courses that permit physicians to obtain the necessary training for licensure by the Nuclear Regulatory Commission. The courses cover radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiopharmaceutical chemistry.

In addition to the residency program described above, Rush University offers a program leading to a master of science degree in radiological sciences. The goal of the program is to train well-motivated physicians and dentists in radiological research as it applies to various branches of radiation medicine (i.e., therapeutic radiology, diagnostic radiology, and nuclear medicine) and to protection from radiation. The program offers optional areas of inquiry.

Graduates of the program, having demonstrated an ability to carry out research by completing the requirements for the master of science degree, will have an enhanced opportunity to enter a career in academic medicine. Furthermore, having participated in research, they will be more proficient in evaluating the significance of research reported in the medical literature.

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## Section of

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### Radiation Biology

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***David B. Rubin, M.D., Director***

The research section of therapeutic radiology is involved in several projects designed to investigate the mechanisms of the alteration of radiation injury. The major focus of inves-

tigations in the science of radiation biology has been the radiation response of the vascular endothelial cell (EC). The vascular EC is the lining cell of all blood vessels and is an important regulator of blood flow and interaction between blood and surrounding tissue. ECs are critical targets of radiation injury and other types of free radical oxidant stress. For radiation oncologists, a better understanding of the destruction, survival, and function of injured ECs could lead to the development of stratagems that would protect normal tissues against radiation while enhancing the treatment of tumors. However, the understanding of the EC response to free radical oxidant stress is also applicable to acute and chronic diseases that concern all aspects of medicine.

ECs cultured from bovine vessels have been irradiated in order to study (1) the role of antioxidant defenses in cell survival, (2) cell cycle events related to survival, and (3) the role of eicosanoids as markers and moderators of damage. The mechanisms of change in cellular and tissue radiosensitivity may be useful in altering the therapeutic ratio and increasing the effectiveness of radiation as a treatment of cancer. A formal course in radiobiology is offered each year in the spring term to acquaint students with the fundamentals of the interaction of ionizing radiation with living organisms. The staff of the section also provides lectures on radiation effects to the graduate nursing oncology program each year. Residents in therapeutic radiology have a three-month rotation through the laboratory to become familiar with laboratory procedures involved in the research program. The combination of course work and active participation in ongoing research activities provides residents with both established concepts and current views in the field of radiobiology as applied to radiation therapy.

## Department of Urology

### **Charles F. McKiel, Jr., M.D., Chairman**

The Department of Urology offers a five-year residency program approved for certification by the American Board of Urology. The residency program is fully accredited by the Residency Review Committee in Urology and the Accreditation Council on Graduate Medical Education. A full-time pediatric urologist is head of the Section of Pediatric Urology.

The first two years of residency training are devoted to nephrology, oncology, radiology, infectious diseases, general surgery, renal transplantation, and other specially requested programs approved by the chairman. This plan gives residents a firm foundation when urological training begins in the third year of residency. The resident will have at least 12 months of general surgery during the pre-urologic years.

The third year of residency is the first year in urology. Emphasis is placed on endoscopy and the various special diagnostic techniques that are

the backbone of the specialty. Residents gain wide experience in urologic surgery, usually as first or second assistant.

Third-year residents have wide primary responsibilities in patient care, but they are encouraged to conduct some research in association with a member of the staff in the urology research laboratory. Such research may be continued in future years.

The fourth-year resident assumes increasing responsibility for the inpatient service at Presbyterian-St. Luke's Hospital. During the fourth year, residents perform major urologic surgery under close supervision and begin their transurethral experience.

During the fourth year, residents are assigned to pediatric urology for a six-month period. They scrub on all pediatric cases and see pediatric patients in the office with the pediatric urologist.

In the fifth year, senior residents are also in charge of all conferences and delegate responsibility for education, patient care, and research as they see fit. Although attending urologists are





always available for counsel and assistance, the senior resident is encouraged to pursue a vigorous and self-reliant course of patient care and teaching.

All patients admitted to the service are available for teaching. Clinical experience encompasses a broad scope of problems, including infertility, tumor surgery, stone disease treated by percutaneous ureteroscopy and extracorporeal shock-wave lithotripsy, obstructive diseases of the urinary tract, microsurgery, and the use of prostheses (urinary and penile).

Active teaching clinics are conducted in private outpatient offices located in the Professional Building. The department sees approximately 3,883 patients per year, 92 percent of whom are adults and 8 percent of whom are children. Currently, an average of 4,800 surgical procedures

are performed, including transurethral resections.

All residents are required to attend weekly teaching conferences held at Rush Medical College. Residents are required to participate in and attend those conferences on the service through which they are rotating during the first and second years. The journal club meets twice a month. Chairman's rounds are held weekly. Morbidity and mortality conferences are held monthly. All residents are required to participate in the Chicago Urological Society meetings. The society meets regularly during the winter months. Out-of-town speakers are regularly invited to give special rounds, which may deal with new research, new surgical or diagnostic techniques, or new concepts in treatment.

All residency inquiries should be directed to the chairman.

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## Organization of the Medical Center

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### Management

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Leo M. Henikoff, M.D.  
President and Chief Executive  
Officer  
Donald R. Oder  
Senior Vice President and Chief  
Operating Officer  
Roger C. Bone, M.D.  
Vice President, Medical Affairs,  
and Dean, Rush Medical College  
Kathleen Gainor Andreoli, D.S.N.  
Vice President, Nursing Affairs,  
and Dean, College of Nursing  
John E. Trufant, Ed.D.  
Vice President, Academic  
Resources; Dean, The Graduate  
College; and Dean, College of  
Health Sciences  
Kevin J. Necas  
Vice President, Finance  
Patricia Castel Skarulis  
Vice President, Information  
Services  
Avery Miller  
Vice President, Inter-Institutional  
Affairs  
Max Douglas Brown, J.D.  
Vice President, Legal Affairs  
Jack R. Bohlen  
Vice President, Philanthropy  
and Communication  
Truman Esmond, Jr.  
President and Chief Executive  
Officer, Rush-Presbyterian-  
St. Luke's Health Plans, Inc.  
Marie E. Sinioris  
Vice President  
President, ArcVentures, Inc.  
Senior Vice President and  
Chief Operating Officer, Rush-  
Presbyterian-St. Luke's Health  
Plans, Inc.  
James T. Frankenbach  
Vice President  
President and Chief  
Executive Officer, Rush North  
Shore Medical Center  
D. Chet McKee  
President, Copley  
Memorial Hospital  
Sister Patricia Ann  
President, Holy Family  
Hospital

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### Rush University

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Leo M. Henikoff, M.D.  
President  
Donald R. Oder  
Senior Vice President and  
Treasurer  
John E. Trufant, Ed.D.  
Vice President, Academic  
Resources  
W. Randolph Tucker, M.D.  
Director, Research  
Administration  
William C. Wagner, Ph.D.  
Associate Dean, Student  
Services  
Joe B. Swihart, M.S.Ed.  
Registrar  
Phyllis J. Peterson, M.Ed.  
Director, College Admissions  
Services, and Director, Affiliated  
College Programs  
Marilyn A. Johnson, Ph.D.  
Director, Student Counseling  
Center  
Robert A. Dame, M.B.A., M.A.  
Director, Student Financial Aid  
Jane Allenson  
Manager, Financial Affairs  
Beverly B. Huckman  
Equal Opportunity Coordinator  
for Academic Affairs

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### Rush Medical College

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Roger C. Bone, M.D.  
Dean  
Erich E. Brueschke, M.D.  
Vice Dean  
Larry J. Goodman, M.D.  
Associate Dean, Medical  
Student Programs  
Harold A. Paul, M.D., M.P.H.  
Associate Dean, Educational  
Development  
Edward J. Eckenfels  
Assistant Dean, Academic  
Counseling  
Ann Bartolotta, M.S.  
Assistant Vice President,  
Medical Affairs, and Assistant to  
the Dean, Rush Medical College



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### College of Nursing

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Kathleen Gainor Andreoli, D.S.N.  
Dean, College of Nursing  
Margaret A. McLaughlin, M.D.  
Assistant Dean, Medical  
Student Programs  
Lois Nora, M.D.  
Assistant Dean, Clinical  
Curriculum  
Cheryl Easley, Ph.D.  
Interim Associate Dean  
Donna Ipema, Ph.D.  
Director, Curriculum and  
Instruction  
Barbara Haynes, Ph.D.  
Director, Student Support  
Services  
Patricia Lau, M.P.A.  
Administrative Assistant

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### College of Health Sciences

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John E. Trufant, Ed.D.  
Dean, College of Health  
Sciences

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### The Graduate College

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John E. Trufant, Ed.D.  
Dean, The Graduate College

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### Approvals and Accreditations

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Joint Commission on Accreditation  
of Healthcare Organizations  
Liaison Committee on Medical  
Education  
Department of Registration and  
Education, State of Illinois  
North Central Association of  
Colleges and Schools  
National League for Nursing  
Council on Accreditation of  
Educational Programs for  
Nurse Anesthesia

American Medical Association's  
Committee on Allied Health  
Education and Accreditation  
Accrediting Commission of  
Education for Health Services  
Administration  
Accreditation Council on Graduate  
Medical Education  
Association for Clinical Pastoral  
Education  
American Dietetic Association  
American Occupational Therapy  
Association  
Commission on Allied Health  
Education and Accreditation  
National Accrediting Agency for  
Clinical Laboratory Sciences

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### Licenses

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Department of Public Health,  
State of Illinois  
Cook County Board of Health

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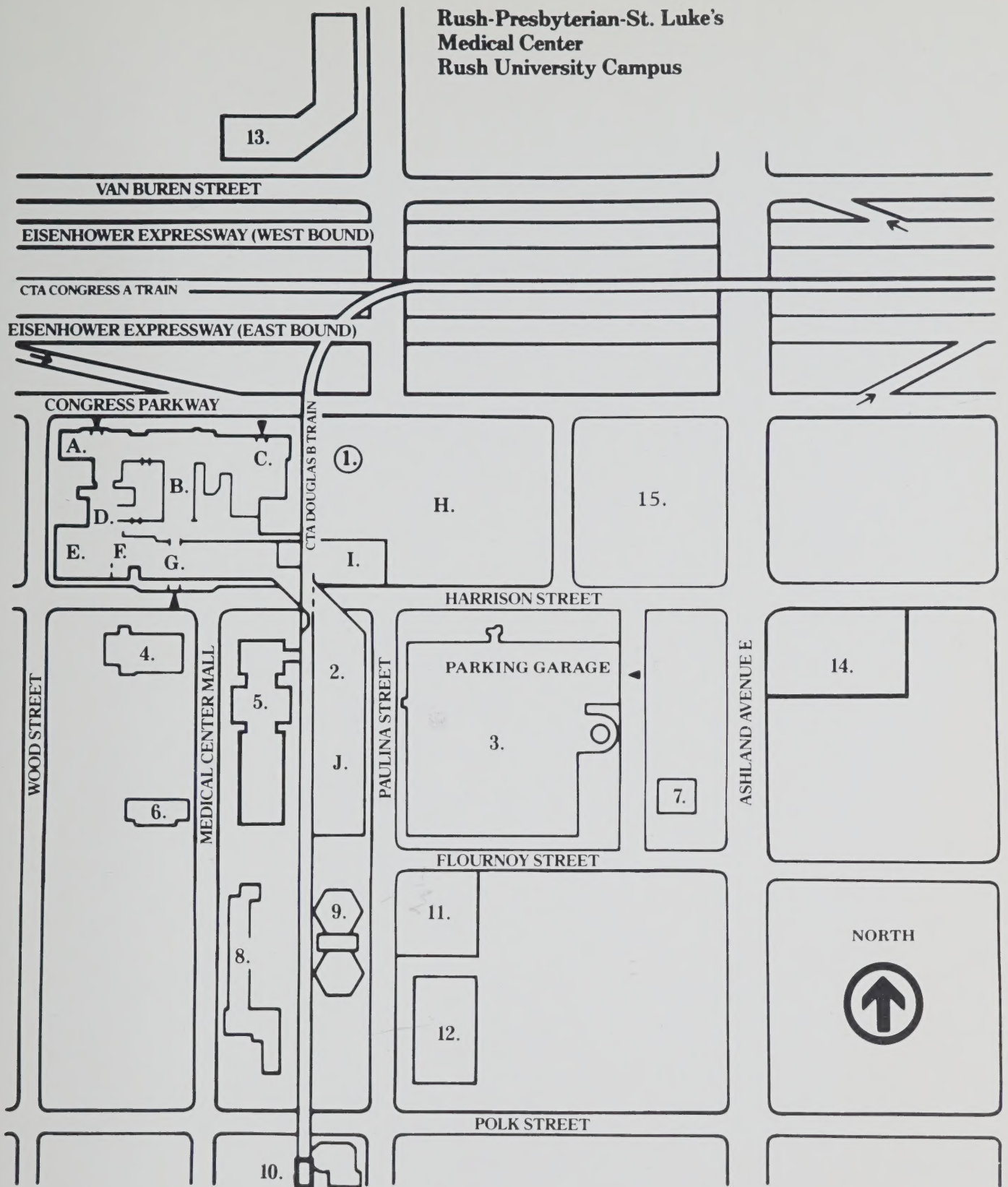
### Memberships

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American Hospital Association  
Illinois Hospital Association  
Metropolitan Chicago Health  
Care Council  
American Association of Colleges  
of Nursing  
Federation of Independent Illinois  
Colleges and Universities  
Blue Cross/Blue Shield Health  
Care Service Corporation  
Association of American Medical  
Colleges  
American Association of Allied  
Health Professions  
Association of University  
Programs in Health  
Administration  
Association for Health Services  
Research  
Voluntary Hospitals of America

**NOTES**





①. Presbyterian-St. Luke's Hospital

- A. Jones
- B. Pavilion
- C. Kellogg Pavilion
- D. Murdock
- E. Rawson
- F. Senn
- G. Jelke SouthCenter
- H. Atrium Building
- I. Woman's Board Cancer Treatment Center

- 2. Academic Facility
- J. Employee and Student Cafeteria

- 3. Parking Garage
- 4. Schweppe-Sprague Hall

- 5. Professional Building
- 6. Kidston Apartments
- 7. Laurance Armour Day School
- 8. Marshall Field IV Mental Health Center
- 9. Johnston R. Bowman Health Center for the Elderly
- 10. Polk Street Station, CTA
- 11. Parking
- 12. Human Resources Center for Employee Development
- 13. 1700 W. Van Buren Office Building
- 14. The Inn at University Village
- 15. Tennis Courts/Jogging Track

